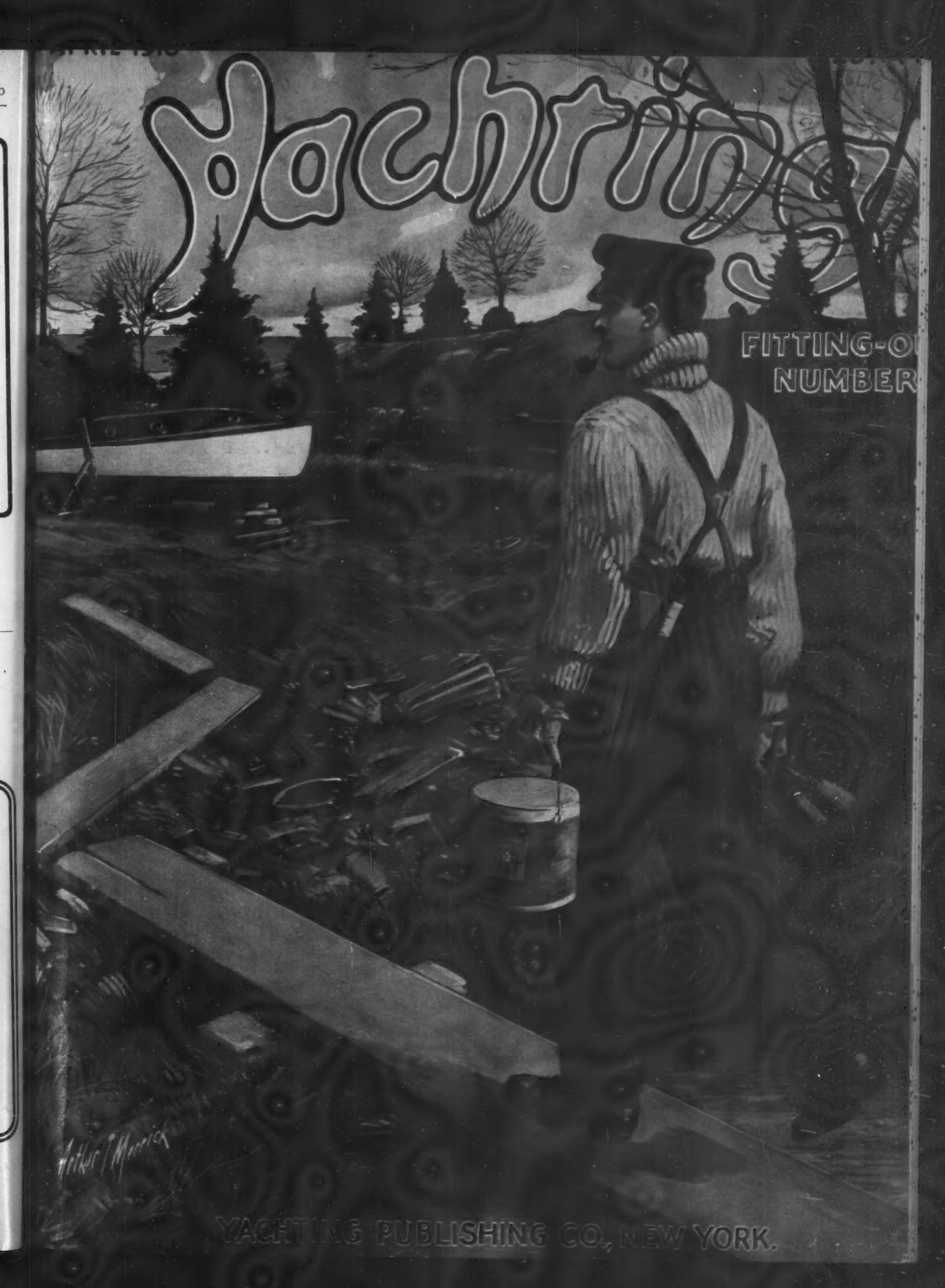
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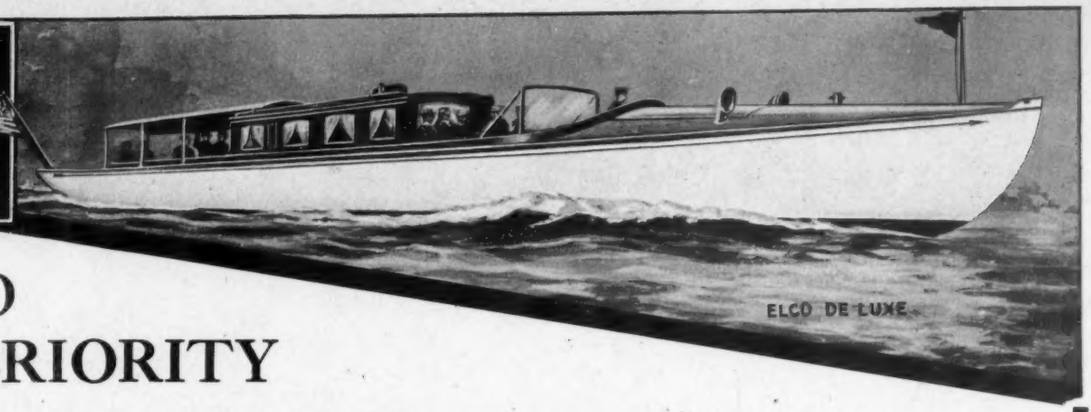

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was again established at the Motor Boat Show. Their beauty of finish, graceful lines and perfect accommodations, their wonderful speed, absolute seaworthiness and safety made them incomparable. On this point public opinion was unanimous.

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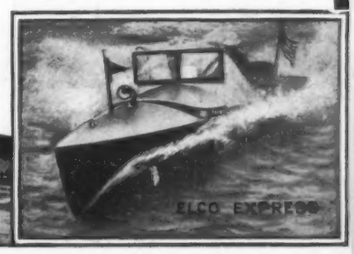

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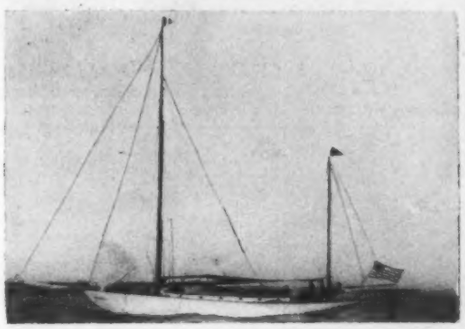
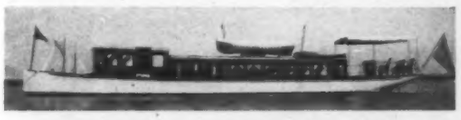
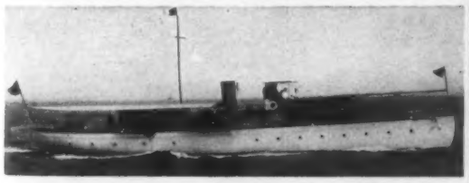


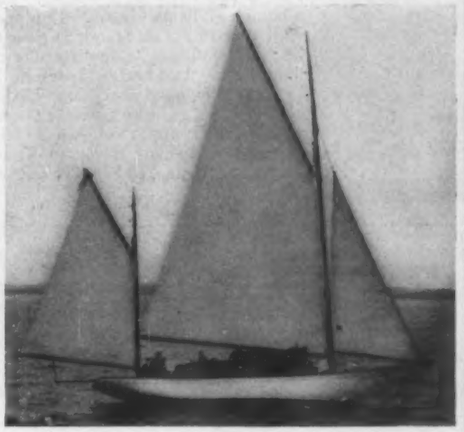
NO. 697.—Cruising auxiliary yawl, 60 ft. over all, 40 ft. waterline, 14.6 ft. beam, 5.6 ft. draught (without board). Built 1903. Double stateroom, 12 ft. saloon, bathroom, two toilets, etc. 20 H. P. Standard motor; speed, 9 miles. Price very low. Details from Gielow & Orr, 52 Broadway, New York City.



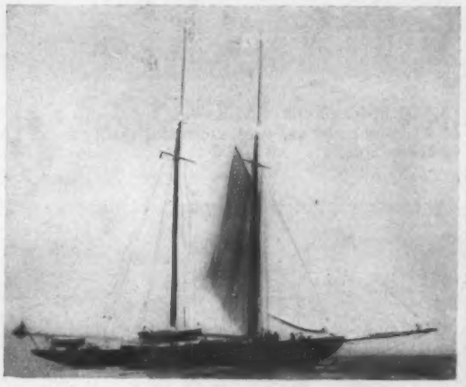
NO. 322—BARGAIN.—Fast cabin cruising launch; 61 x 9.6 x 3.3 ft. Speed, 12 to 14 miles; 60 H. P. Craig motor, thoroughly overhauled last Spring. Cabin finished in selected mahogany throughout. Constructed of the best. Accommodations for six in pilot house and 14 ft. saloon. Acetylene lights. Last Spring $1500 was spent on motor and for new furnishings. Everything in excellent condition. Inspection invited. Apply to Gielow & Orr, 52 Broadway, New York City.



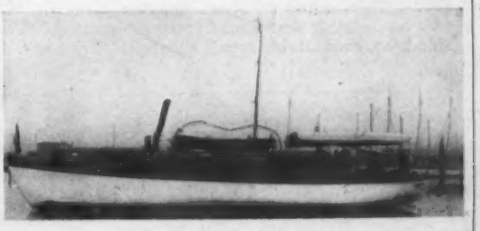
NO. 1427—FOR SALE.—Desirable and roomy steam yacht; 99 ft. over all, 92 ft. waterline, 17 ft. beam, 5 ft. 6 ins. draught. Built in 1899. Well kept up; excellent condition throughout. Speed, 10 to 12 knots. Social hall in forward deckhouse, dining saloon in aft one. Below forward main saloon, two double and two single staterooms, bathroom, etc. Aft is galley and crew's quarters. Two triple expansion engines; watertube boiler new, 1909. Complete electric light plant. Excellent inventory. Has gone through Erie Canal and cruised on Great Lakes, St. Lawrence River, and Atlantic Coast, Maine to Virginia. Bargain; owner building larger yacht. Gielow & Orr, 52 Broadway, New York.



NO. 148.—Keel and centreboard auxiliary yawl, 38.9 ft. over all, 26.6 ft. waterline, 12 ft. beam, 3.10 ft. draught. Very desirable and complete craft. Full headroom. 12 to 15 H. P. 2-cylinder, 4-cycle motor. Price attractive. Careful inspection invited. Apply to Gielow & Orr, 52 Broadway, New York.

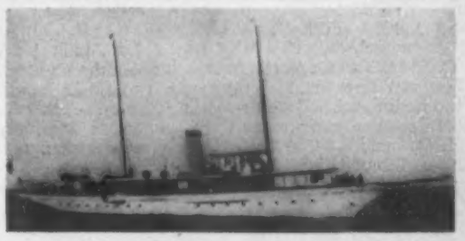


NO. 1038.—Keel cruising auxiliary schooner yacht, 92 ft. over all, 62 ft. waterline, 19.6 ft. beam, 9 ft. draught. Built by Lawley in 1903. Two double staterooms, 13 ft. saloon, bathroom, three toilets, etc. Excellent equipment. 25 H. P. Standard motor. Price very low. Apply to Gielow & Orr, 52 Broadway, New York.

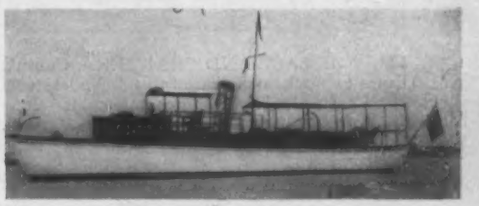


NO. 2720—BARGAIN.—Raised deck cruiser, 50 x 12 x 3.6 ft. Launched September 1908. Very substantially constructed. Double stateroom, saloon, etc. 18 H. P. Standard motor (develops 24 H. P.) Electric lights. Finish throughout, oak bright. Apply to Gielow & Orr, 52 Broadway, New York.

NO. 2468.—Attractive twin screw power yacht, 72 x 13 x 3.8 ft. Built Fall 1907. Good accommodations. Speed, 10 to 12½ knots, two 25 H. P. Standard motors. Acetylene lights. Completely found in every respect. Price low. Apply to Gielow & Orr, 52 Broadway, New York.



NO. 63.—Modern 150 ft. steel steam yacht. Speed up to 18 miles. Five double staterooms, bath, large main saloon, social hall and dining room. Exceptional bargain. Apply to Gielow & Orr, 52 Broadway, New York.



NO. 1885.—Gasolene cruiser, 60 x 11.3 x 4.2 ft. Speed, 9 to 10 knots; 40 H. P. Murray & Tregurtha motor. Interior finish mahogany. Two staterooms, saloon, two toilets. Fine sea boat. Bargain for immediate sale. Apply to Gielow & Orr, 52 Broadway, New York.

NO. 339.—Crosby auxiliary catboat, 35 ft. over all, 14.9 ft. beam, 3 ft. draught. Copper fastened. Full headroom. Sails, mast and rigging new last season 15 H. P. 4-cycle motor. Excellent condition. Probably most desirable boat of type and size available. Apply to Gielow & Orr, 52 Broadway, New York.

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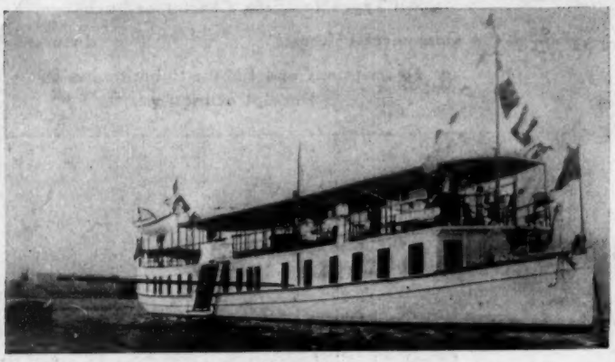
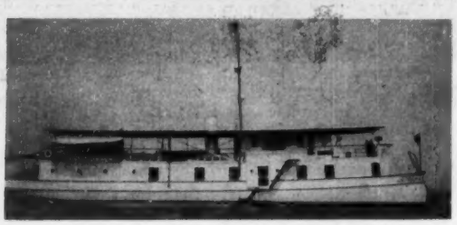
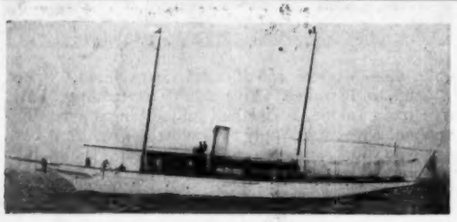


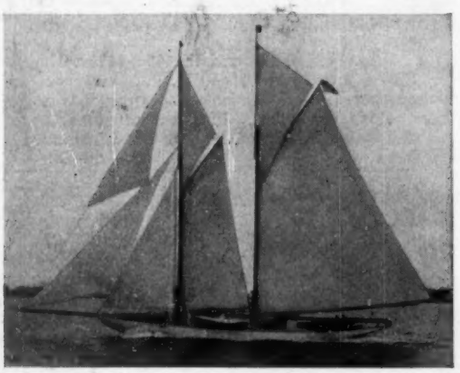
NO 1808—FOR CHARTER AND FOR SALE.—Twin screw power houseboat, 123.3 ft. over all, 115 ft. waterline, 17.8 ft. beam, 3.6 ft. draught. Built in the best possible manner 1901. Has five large staterooms, two bathrooms, saloon. Has a launch and small boats. Equipped with two 75 H. P. Standard motors. Speed, 9 knots. Complete electric light plant. Hot and cold water. Is in unusually good condition, having always had the best of care. Owner will consider any reasonable offers. For full particulars apply to Tams, Lemoine & Crane, 52 Pine Street, New York.



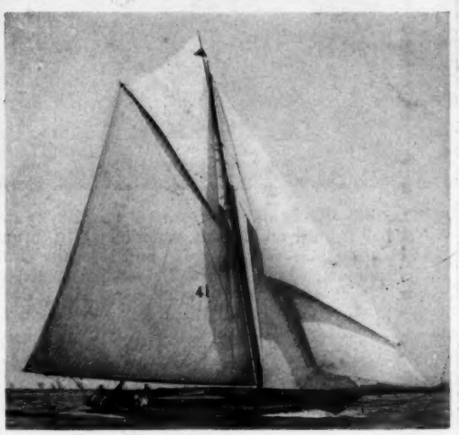
NO. 1820—FOR CHARTER AND SALE.—Motor houseboat, 103 x 94 x 20.4 x 2.6 ft., built 1903. Yacht suitable for Northern as well as Southern waters. Has two large double staterooms, two single rooms, two bath rooms, saloon, two sitting rooms on deck. In best possible condition. Twin screw, has 2 seventy H. P. motors. Can be had for a reasonable figure. Now in commission.



NO. 574—FOR SALE AND CHARTER.—Unusual chance to purchase or charter this desirable steam yacht, 97 x 85 x 15.4 x 8. Has three staterooms, saloon below, dining saloon on deck. Crew's quarters forward. Very economical.



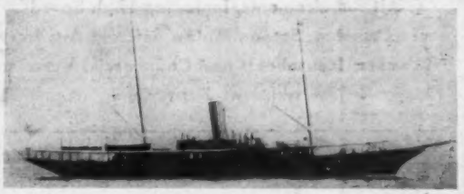
NO. 4543—FOR CHARTER AND FOR SALE.—This fast, handsome auxiliary schooner, 89 x 62 x 18.3 x 8.5 ft. Built 1902. 25 H. P. motor recently installed. 25 tons lead ballast. Ratsey sails. Three staterooms, one double and large saloon. Best possible condition. Carries three boats including launch. Fully found. Sell at low figure.



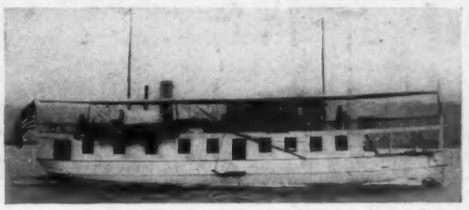
NO. 3043.—FOR SALE.—52.8 x 34.10 x 12 x 8, designed by us, very successful racing as well as cruising boat.

NO 7275—FOR SALE OR CHARTER—This attractive motor yacht, 72 x 68 x 13 x 3.8, built 1907. Twin screw, 25 H. P. Standard motors. Will very comfortably sleep four in owners' quarters. Very able boat, comfortable crew's quarters. Price low.

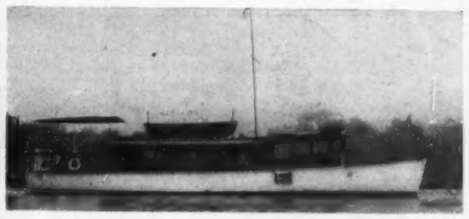
NO. 7442—FOR CHARTER AND FOR SALE.—Cruising motor yacht, Lawley design and build, 81 x 73 x 13 x 4 ft. draught; launched 1907; speed, 15 miles; two double, two single staterooms; two berths in saloon; sleeps nine; equipped with 100 H. P. Standard, self-starting. Price attractive.



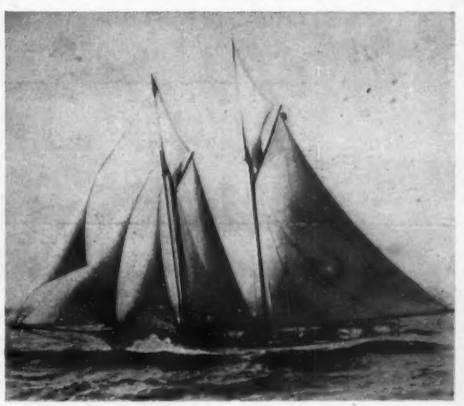
NO. 166—FOR CHARTER AND SALE—196 x 163 x 25.7 x 11.6 ft.; nine rooms, two baths, dining, sitting, smoking rooms.



NO. 1837—FOR SALE AND CHARTER.—This attractive power houseboat 87 x 76 x 23 x 4 ft. built 1906. Three large staterooms, three bath rooms. Saloon below sitting room on deck. Two 75 H. P. motors. Complete outfit.



NO. 7309—FOR SALE AND CHARTER.—This handsome cruising launch, 47 x 9.6 x 3.6. 20 H. P., 20th Century motor; speed, 12 miles. Will sleep four in owners quarters. Fully found for cruising. Very able yacht.



NO. 1039—FOR CHARTER AND FOR SALE.—Steel flush deck auxiliary schooner "Iroquois," 98 x 80 x 21 x 11 ft. Best condition. Completely overhauled this Spring, having new white pine deck, running and standing rigging. 60 H. P. Remington oil motor installed under Messrs. Cary Smith & Ferris's supervision. Craig bronze feathering propeller. Speed over 9 miles an hour. Five staterooms, bathroom, large saloon. Unusual opportunity. Owner would consider any reasonable offers. For full particulars apply to your own broker or Tams, Lemoine & Crane, 52 Pine Street, New York.

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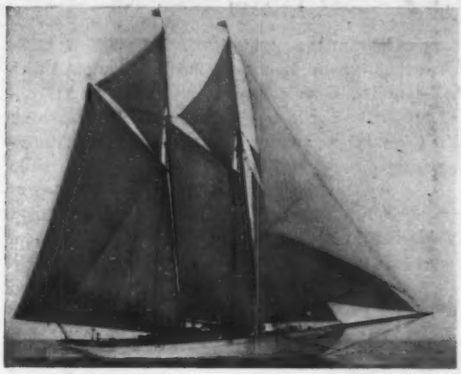
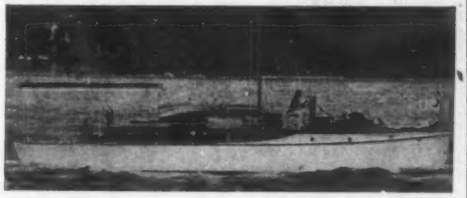
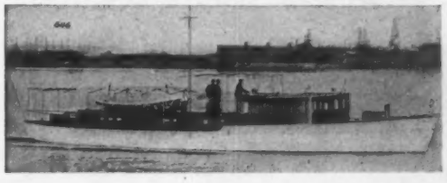


NO. 305,527.—Auxiliary centerboard schooner yacht, 88 x 68 x 19.10 ft. draught; three staterooms, large saloon, with two berths; bath room; two toilets; 25 H. P. Standard. In A-1 condition. In commission.

NO. 741.—Gasolene cruising launch, 58 x 50 x 11.3 x 4 ft. draught; launched 1906. Finished in mahogany throughout. Steers from bridge in pilot house. Excellent accommodations. Equipped with 40 H. P. Murray & Tregurtha engine. Speed 12 miles. Cox & Stevens, 15 William Street, New York City.



NO. 605.—Raised deck cruising launch, 50 x 47 x 10.6 x 3 ft. draught; launched 1909. Price attractive.

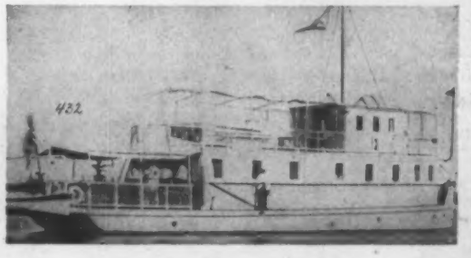


NO. 546.—Cruising power yacht, 70 ft. over all; 12.3 ft. beam; 4 ft. draught; launched 1907; 50 H. P. Standard; speed, 13 miles; accommodations for six people; mahogany finish throughout. In commission.

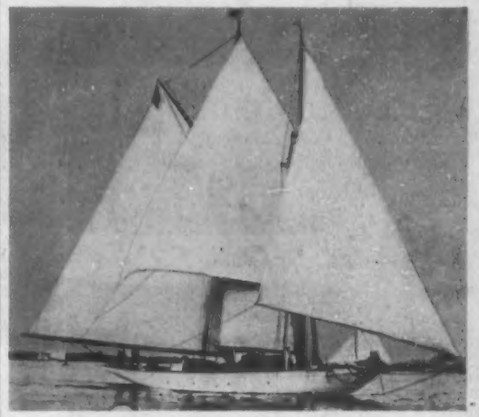
NO. 297.—Bargain, fast cruising motor yacht, 75 x 73 x 10 x 3 ft. draught; has stateroom; saloon with two berths, bath room, etc. Equipped with 100 H. P. Standard. Speed, 15 miles. In commission.

NO. 537.—Fast cruising launch, 58 x 57 x 10.6 x 3.6 ft. draught, launched 1907; new 75 H. P. 20th Century engine; speed, 15 miles. Double stateroom forward; saloon, two berths; enclosed toilet; electric lights. One man control boat. Price low.

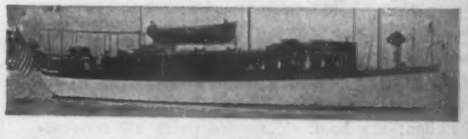
NO. 1000—Modern cruising power launch, 55 ft. over all: 10.3 ft. beam; 3.6 ft. draught. Built 1909. Sleeps six besides crew. 25 H.P. Standard. Speed, 10 miles. Price attracitve.



NO. 432.—Twin screw gasoline power houseboat, 75 x 20 x 30 ins. draught. Six staterooms, saloons bath room, etc. Roomiest craft of her size. All conveniences, fully found. Standard engines.

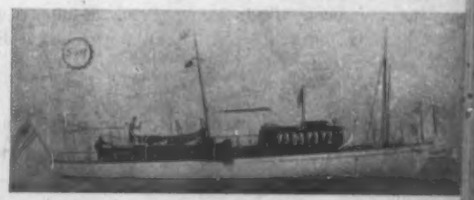


NO. 525.—Fast cruising keel schooner yacht, Lawley design and build; 76 ft. over all; 52 ft. waterline; 16 ft. beam, 9 ft. draught; flush deck and cockpit; exterior finish in teak; interior, mahogany; one double and one single stateroom; saloon with three berths; conditions absolutely perfect. Price attractive.



NO. 548.—Desirable gasoline launch, 50 x 49 x 11 x 3 ft. draught, beautifully finished and fitted. Excellent proposition for cruising or day service. 25 H. P. Murray & Tregurtha engine. Saloon forward, four berths. Engine room and crew's quarters aft. Roomy flush deck aft. Price attractive.

NO. 288—Twin-screw motor yacht; 67 x 56 x 12 x 3.6 ft. draught. Sleeps seven. Two 40 H.P. Lamb engines. Condition first class. Price low.



NO. 549.—Gasolene cruising launch, 69 x 60 x 12 x 4.6 ft., Lawley design and build. Sleeps seven comfortably; privacy in owner's quarters; 50 H. P. Standard engine; speed, 14 miles; electric lights; all conveniences. Price attractive.

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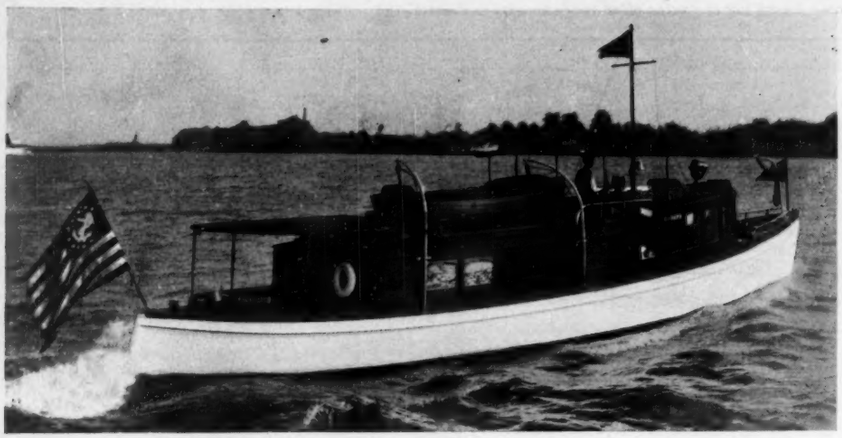
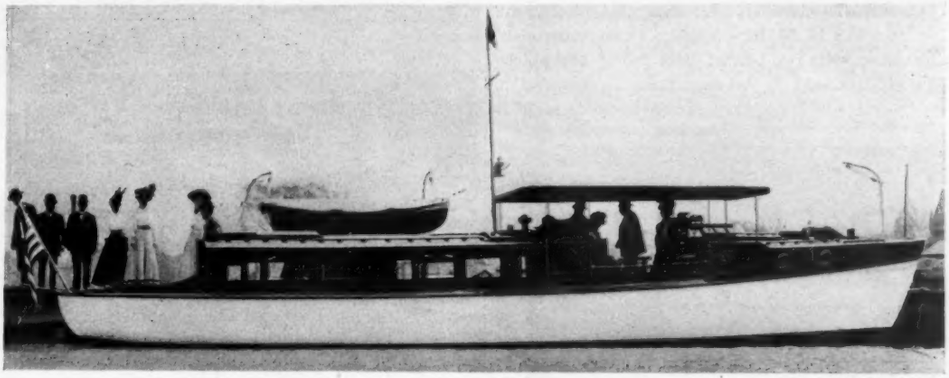


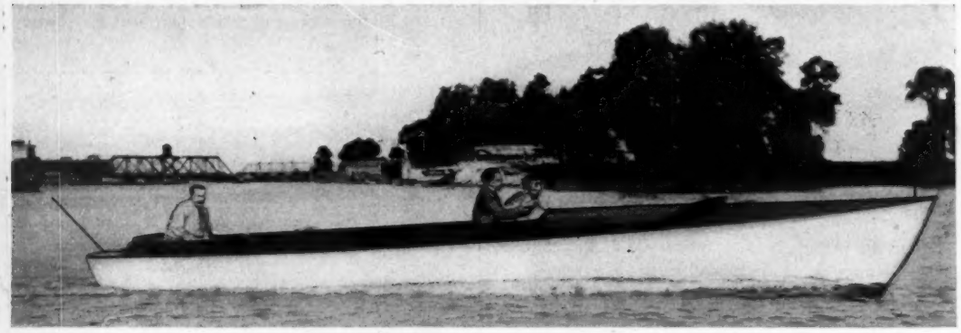
MAHAPA I.

Single-screw gasolene motor yacht, 52 ft. x 11 ft. 3 in. x 3 ft. 6 in. Launched 1906. Solid mahogany finish. Equipped with one 40 H. P., 4-cylinder, 4-cycle Lozier motor, in perfect condition. Speed 11½ miles per hour. Two double berths in after cabin adjoining toilet. Galley with complete equipment. Motor-room with engineer's room and toilet. Two folding berths in pilot-house. Sleep six to eight persons comfortably. Independent electric light plant, Richardson outfit with Buffalo motor. Boat recently overhauled and refinished. In perfect condition Owner building 85-foot boat.

LEONOR

Midship cockpit Gasolene cruiser. 51 ft. x 11 ft. 3 in. x 3 ft. 6 in. Solid mahogany finish. Teak decks. 25 H. P., 4-cylinder, 4-cycle, Standard motor, with complete inventory. Speed 11¼ miles per hour. Boat recently overhauled and re-finished. Launched 1908. Stateroom aft, with double berth and sofa berth. Toilet room opening from either stateroom or main cabin. Main cabin fitted with two extension berths and one folding berth. Motor installed partly under the bridge deck. Crew's quarters forward. Sleeps eight people comfortably. Electric light plant. Plenty of desirable outside room. Excellent sea boat. Supplied with all conveniences. Owner building larger boat.





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Runabout, 32 ft. x 5 ft. 6 in. x 26 in. Mahogany finish. Jager 50 H. P., 4-cylinder, 4-cycle motor, with Bosch magneto. Force-feed oiling system. Rear starting device. Speed 20 miles per hour. Klaxon horn. Genuine leather cushions. Shipping cover, used six weeks. Fourth boat which we have built for same customer. Now placing order for 45-foot cruiser.

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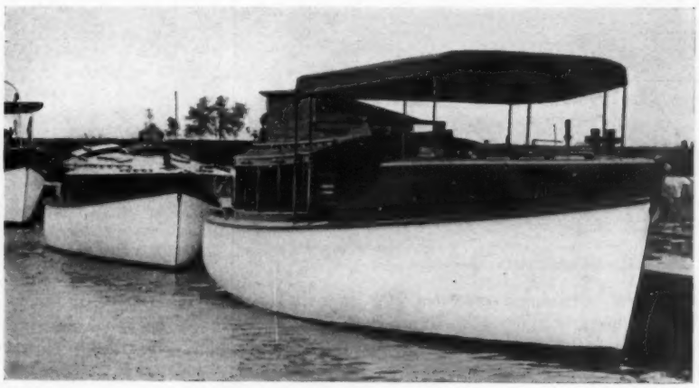

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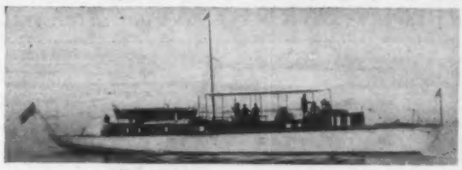
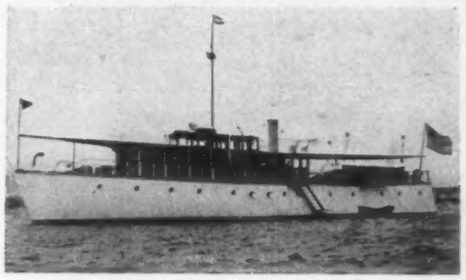


NO. 1470.—Twin-screw gasolene yacht, 93 ft.; three staterooms and saloon; Craig engines; speed, 14 miles; best possible condition throughout.

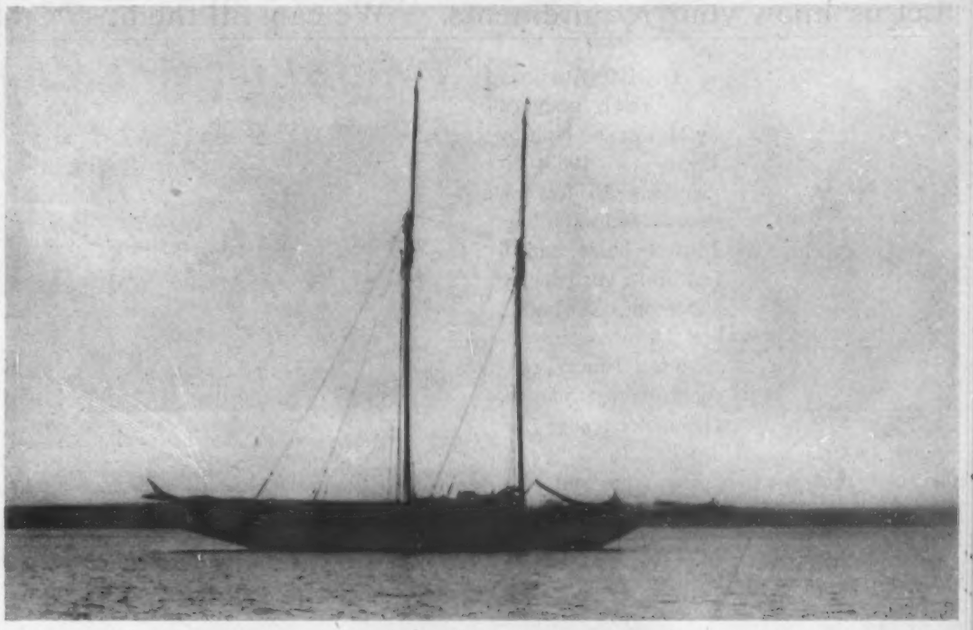


NO. 1238.—Large power cruiser, equipped with three gasolene motors of first-class make; 125 x 20 x 6 ft.; recently launched; offered by an estate.

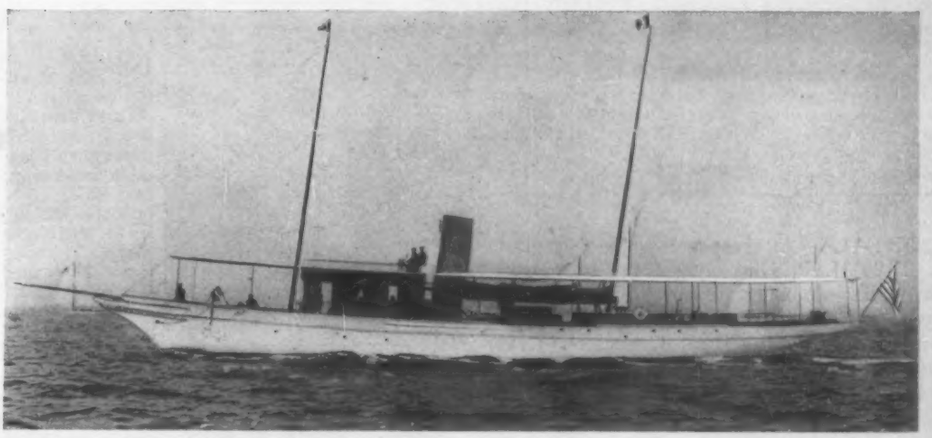
NO. 984.—Twin-screw motor yacht, 91 x 15 ft., launched 1907; two 50 H. P. Standard engines; four staterooms, large saloon, bath and two toilets; sleeps eight comfortably.

NO. 1226.—Staunchly built launch, 60 x 10 x 4, launched 1907; first-class, 4-cylinder engine; speed, 14 miles; sleeping accommodation for four, besides crew. Now on Great Lakes.

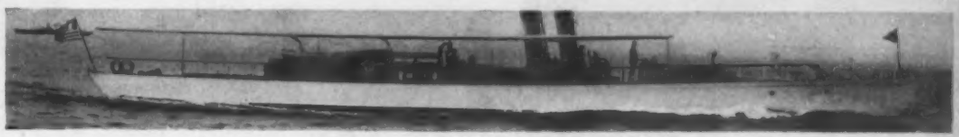
NO. 30H.—Houseboat, about 50 ft. x 15 ft., with 5 staterooms, having 2 bunks each; camp outfit included. For sale or charter. Located St. Lawrence River.



NO. 209.—For Sale:—Handsome steel auxiliary schooner, flush deck, 88 ft. over all, 63 ft. waterline, 18 ft. beam, 8 ft. 6 ins. draft; built by Lawley; equipped with 50-H. P. Craig engine, new 1909; bronze shaft, feathering propeller, etc.; speed, 8 miles; electric lights and storage batteries; lead ballast; complete new and unused suit of sails; two boats (dinghy and launch). Accommodation consists of 2 large double staterooms, 2 single staterooms, commodious main saloon, bath room, captain's room, galley and forecastle. Interior finish of maple. This boat is in excellent shape throughout, and could be put in commission at very small cost. Must be seen to be appreciated. Reasonable figure will be accepted. Season's charter will be considered. For further details, such as plan, price, etc., apply my agent, William Gardner, 1 Broadway, New York City.



NO. 320.—Very able 110-ft. steam yacht, first-class condition in every detail; complete outfit; electric lights; speed, 14 miles. Sleeping accommodation for nine people. Price attractive. Charters considered.



NO. 366.—Modern, 110-ft. fast steam yacht, recently built by Seabury & Co.; twin screw, two triple-expansion engines, new boilers; speed, 23 miles. Excellent owner's accommodation.

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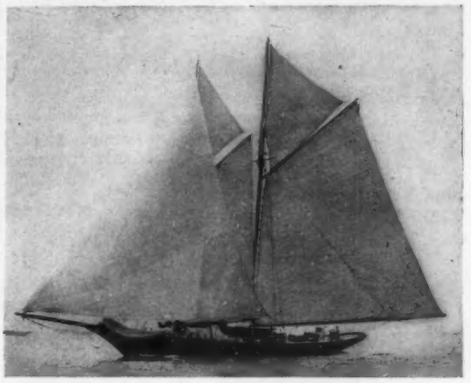
NO. 2100. Auxiliary Yawl, designed by Mower and built by Huntington 1903; dimensions 46 feet on deck, 32 feet water line, 13 feet beam and 6 feet draft; good double stateroom, 2 berths and 2 transoms in cabin; 6 feet 1 inch headroom; mahogany finish. Has motor tender and dinghy; Lathrop motor installed 1906. Probably the best boat of her type and size. FRANK BOWNE JONES, Yacht Agent, 29 Broadway, New York.

NO. 3964.—Modern auxiliary schooner, built by Lawley; dimen- 65 ft. on deck, 44 ft. waterline, 14½ ft. beam and 9 ft. draught; all lead outside ballast; flush deck, accommodations include one double and one single stateroom and saloon. Has power tender and dinghy. Motor is a 2-cylinder 25 H. P. Tuttle installed last season. Yacht is in A1 condition throughout. Price low. FRANK BOWNE JONES, Yacht Agent, 29 Broadway, New York.



NO. 857.—Cruising schooner; dimensions 84 ft. on deck, 60 ft. waterline, 18 ft. beam, 10 ft. draught; extra heavy built. Accommodations include three staterooms, saloon and two washrooms. One of the best and ablest yachts of her size. A good sailer and a splendid sea boat. Is in exceptionally good condition. Has 3 boats including power launch. Offered at a very reasonable price. FRANK BOWNE JONES, Yacht Agent, 29 Broadway, New York.

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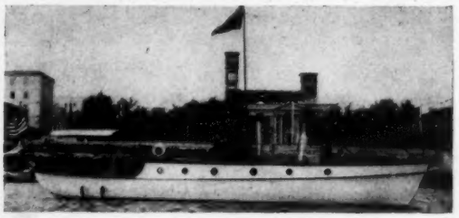

NO. 4600.—Raised deck cruiser; dimensions 58 x 12 x 4 ft; built last season; 6-cylinder, 40-50 H. P. Standard motor. Excellent accommodations, high class construction. A splendid sea boat. Winner of the 1909 Bermuda race. Reasonable price. FRANK BOWNE JONES, Yacht Agent, 29 Broadway, New York.

NO. 2530.—Flush deck steam yacht; dimensions 140 ft. over all, 118 ft. waterline, 19½ ft. beam and 7½ ft. draught; built by Mumm; accommodations include 1 double and 2 single staterooms and bath; good deck dining saloon; Pusey & Jones engine, Handren & Robins Scotch boiler, speed 10 to 12 knots, good coal capacity and low consumption; electric lighted and steam heated. Yacht has been well kept up and is in A1 condition. Is a good sea boat and strongly built. For full particulars communicate with FRANK BOWNE JONES, Yacht Agent, 29 Broadway, New York.

NO. 235.—Fin keel cabin Raceabout, built by Lawley; double planked mahogany; good cabin headroom; new sails; low price. FRANK BOWNE JONES, Yacht Agent, 29 Broadway, New York.

$100.00 buys sloop 25' x 7' 6" keel sloop. Six years old. New sails last year. Owner is leaving the sport. Harry W. Johnson, 112 Union Street, Poughkeepsie, N. Y.

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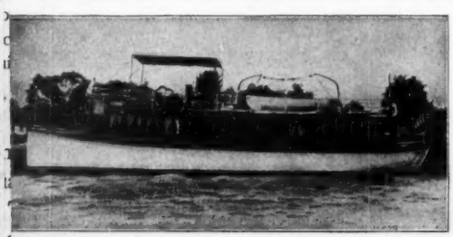

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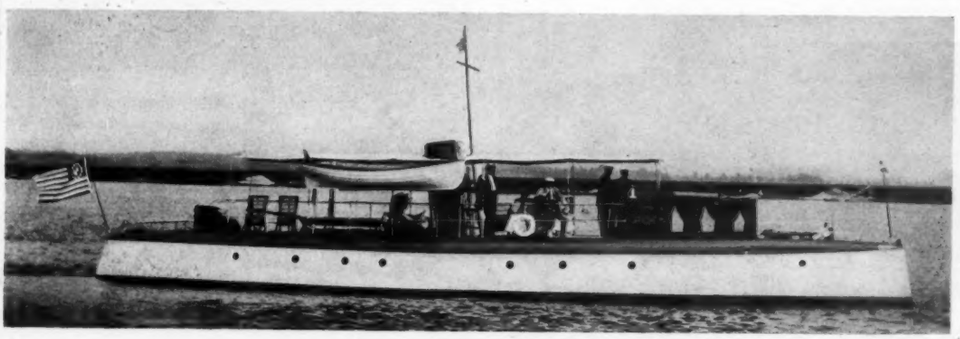

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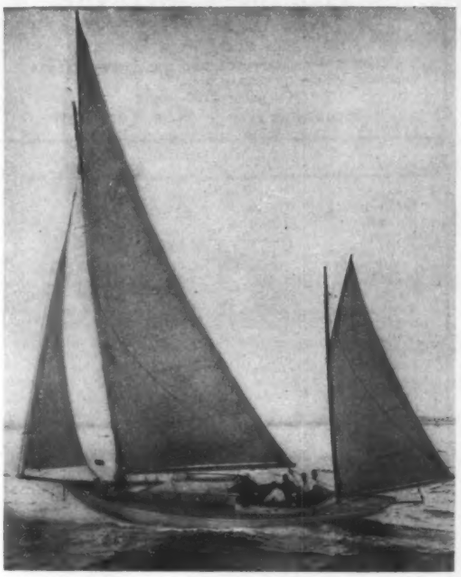
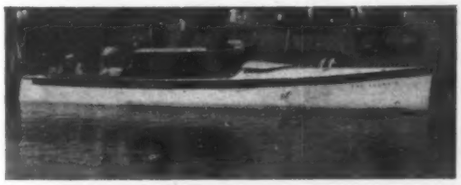


NO. 3135—FOR SALE.—Handsome keel yawl, 46 x 30 x 12 x 6 feet 5 inches draught; Cary Smith design; 9 tons rad. Winner many races; rates Q class present rules. Completely inventoried; launch; toilet; able off-shore cruiser. Particulars, William Kiggins, 45 Broadway, New York.



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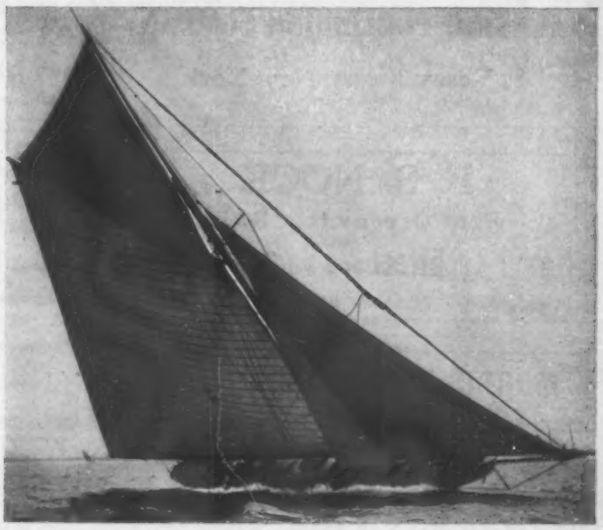

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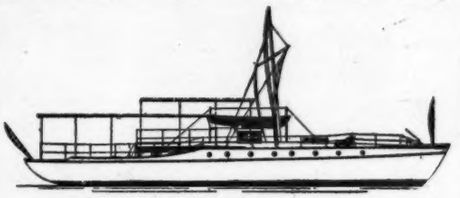

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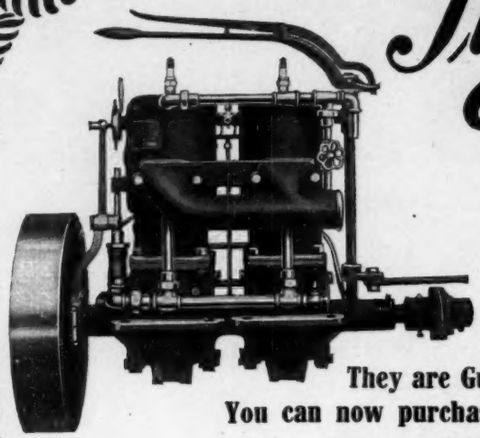

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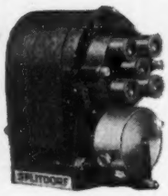

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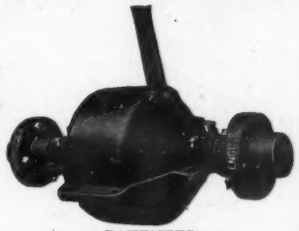

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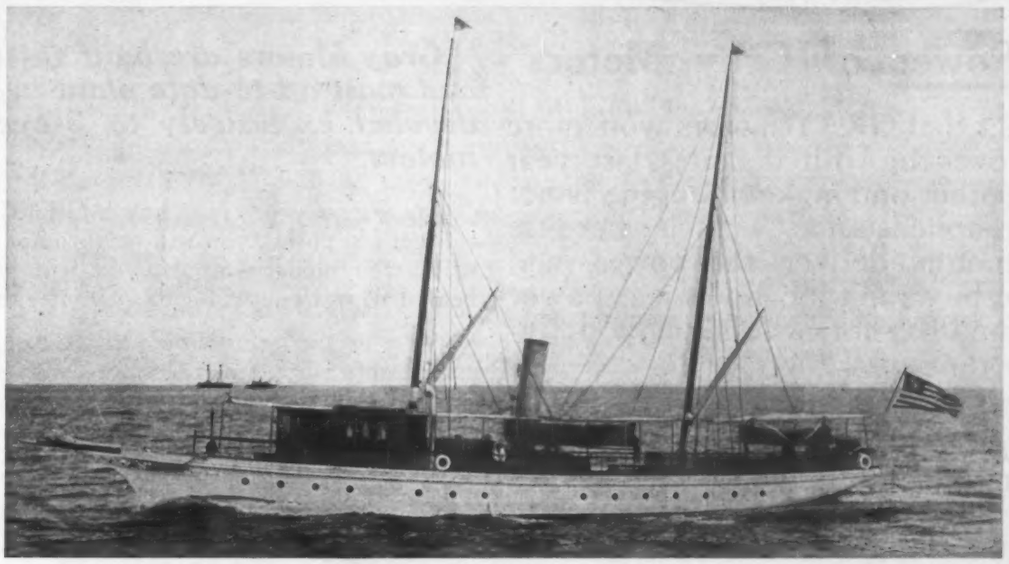

Capt. F. S. Terry, Master THERESA Gustav Sidenberg, Owner

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New York, Sept. 15, 1909.

Emil Calman & Co.,
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Gentlemen:--I wish to tell you of my experience with the use of Enamolin on the Steam Yacht "Theresa." I had the "Theresa" painted last March with two coats of Enamolin, and at this date it has not been repainted, which is something very unusual for this yacht. As on account of docking six to eight times per day, we have always found it necessary to repaint at least once in two months, and sometimes as often as once a month. Enamolin has been a great surprise to me, as I did not know before that a paint could be made that would cover so well and dry so hard as what Enamolin has. The Theresa's sides today look as well as they did in the Spring when the paint was first applied and in the nine years that I have been in command of this yacht it is the first time she has ever run an entire season without repainting. The paint does not show any blistering or checking, and figuring out the cost it is far more economical than buying and mixing our own paint.

You have my free permission to use this letter in any way that you may care to, and I will answer any inquiries that may come to me on this subject.

Frank S. Terry
Master of Steam Yacht "Theresa".

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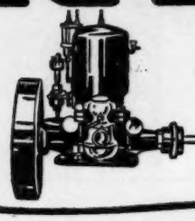

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Don't be disappointed in your marine engine for 1910. Get your order in early and placed with some firm who can make reasonably prompt and sure delivery.

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The GRAY Motor Company has foreseen this condition and has been getting ready for it for the past seven months, beginning to manufacture 1910 engines in September of 1909, and buying material prior to that date.

We increased our capital $150,000 to enable us to go into the market and buy materials in advance and machine up this material ahead of time.

Gray Motors are built in the largest and most up-to-date plant in the world devoted exclusively to 2-cycle marine motors.

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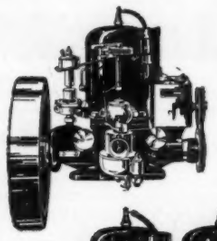

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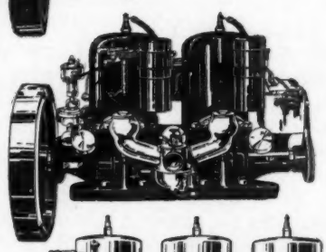

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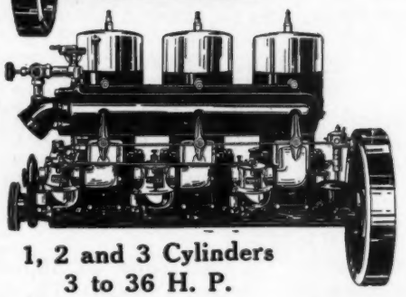

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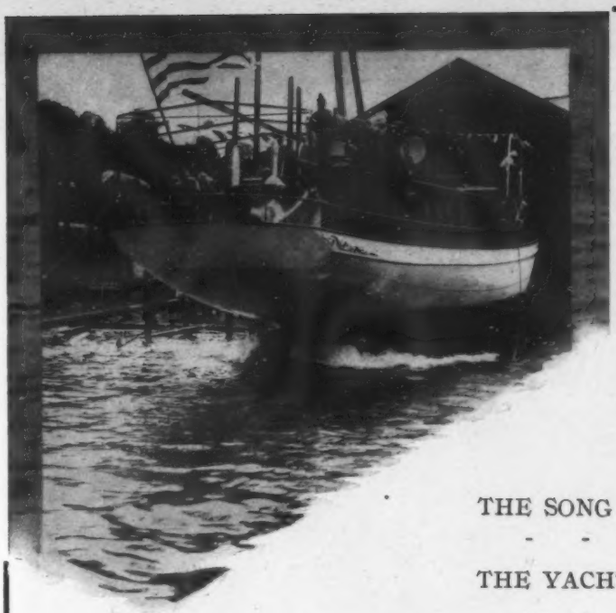

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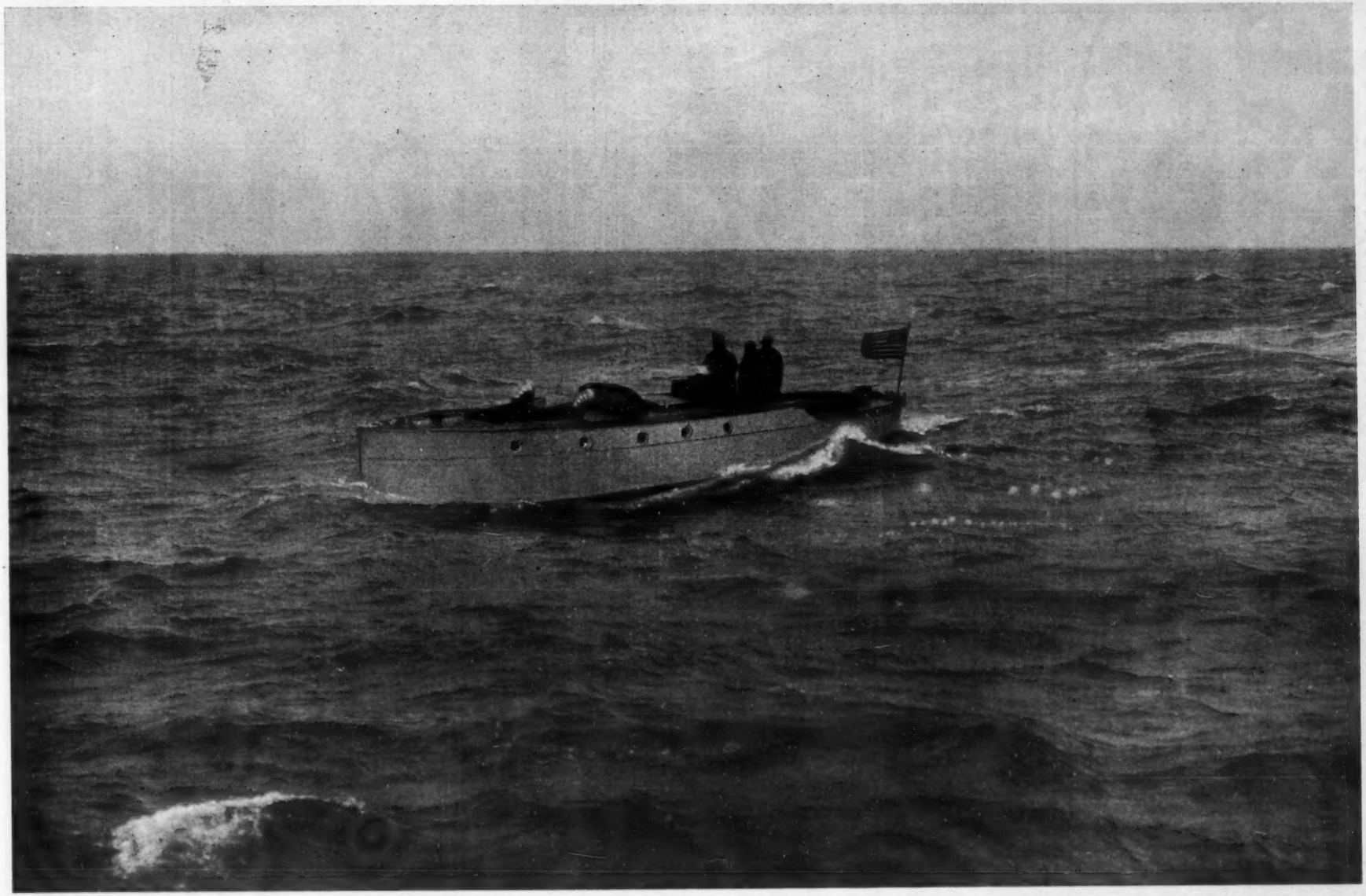


THE FIRST TRIP OF THE SEASON.

YACHTING

VOLUME VII. NUMBER 4 April, 1910 25 Cents a Copy $2.00 a Year

ANCHORED UNDER THE SHORE ON LAKE CHAMPLAIN.

READY TO LEAVE BERGEN BEACH.

LAKE CHAMPLAIN YACHT CLUB AT BURLINGTON.

From Bergen Beach to Canada in Themis

By GEORGE H. HOPPER

FOR some years previous to 1909 we had cruised along both the south and north shores of Long Island until we were well acquainted with both Great South Bay and Sound waters. We had also explored the Jersey coast south of Sandy Hook in our auxiliary sloop Themis, so that when planning a cruise for last summer that should take us into unknown waters we decided on a longer voyage that should take us to Lake Champlain and to the Province of Quebec along the Richelieu River. Upon announcing our intention to the Rocking Chair Fleet, that amiable crowd of stay-at-homes without which no yacht club is complete, we were informed that we would probably get no farther away than Poughkeepsie. Not taking their croakings seriously, however, we went on with our preparations for the trip.

LIGHT ON THE BREAKWATER AT PLATTSBURG.

Themis, on which we were to make the trip, was a 30-foot auxiliary sloop, equipped with a single-cylinder, 7½-horsepower engine of the make-and-break type. She was a good, able boat, and could be depended upon to give a good account of herself in a sea-way. We planned to take the mast out of her at the head of tide water on the Hudson River. Our good-natured mate promised to go to the club the day before that set for the start to stow away the provisions and dunnage which the chaperon expressed to the club, so as to be ready to get away early the following afternoon; but inasmuch as our mate weighed 240 pounds and disliked work, he quickly became indisposed when he saw the truck load of stuff which was to be stowed in one small 30-foot sloop. As he explained afterwards, he thought he had better wait until I appeared, when we could both decide where the stuff should be stowed and what could be left out; so it was not until the next afternoon that we both got to work, and night overtook us before the majority of the litter was in its place.

We got away at last the next morning, Sunday, about 11 o'clock, under power. On the way out we stopped at the gasolene station at Barren Island and put aboard 25 gallons of gasolene. It was blowing hard from W. N. W., and we decided to put the cotton on her before going outside. The captain and the mate had an argument as to whether to put in two or three reefs; but discretion being the better part of valor, we decided on three.

Rockaway Inlet is not a particularly nasty place as inlets go, but when the fishing fleet anchors inside you may be sure it is not a mill pond. However, we decided to go on. Themis handled beautifully, and although we were all soaked with spray, we only took one sea on deck. After we got into deeper water outside the seas were longer, and we rode them comfortably until off Seagate, where we took one solid green fellow right over the cabin house, soaking blankets and cushions. The chaperon seemed to be losing her nerve and inquired if trolley cars ran from the Royal Arcanum Yacht Club, Gravesend Bay, and if we intended to stop there.

It was still blowing hard, and we ran on up the bay under three reefs with the engine pushing us into it. "Little Lathy," as the girls had christened the motor, had run all day without missing an explosion; but just as we got between two big Pennsylvania ferry boats it slowed up and stopped. We hardly had steerage way under sail, as we were blanketed by one of the ferry boats;

IN THE CHAMPLAIN CANAL.

WHEN THE ENGINE WORKED.

CROSSING GRAVESEND BAY IN A NOR'WESTER.

but with the usual good-nature of the big boat pilot towards the little fellow, he sounded four whistles and stopped his engines till we got by. As we passed he leaned out of the pilot house and seemed to be shouting his greeting. We were sorry that we could not understand what he said. Upon investigation of the engine, we found that the water intake was stopped up with seaweed, causing the engine to heat badly. This was soon remedied, and at four bells (six o'clock) we dropped anchor at the Columbia Yacht Club.

The genial owner of the auxiliary sloop Zaneth hailed us and extended an invitation to supper, which we were all glad to accept, and the meal that he served our hungry crew was thoroughly appreciated.

An anchorage off Eighty-sixth Street, on the Hudson River, is not to be recommended to anyone who is subject to mal-de-mer. Every tug and excursion boat that went by almost rolled us decks under. During one of these convulsions a plaintive wail from starboard inquired if there was any danger, and upon being reassured, the chaperon said she thought she would go home in the morning, as she didn't like cruising.

Monday morning, July 27, we got under way about 8:30 and ran to 132d Street, where we landed at the ice dock to buy 50 pounds of ice.

As the Hudson between New York and Albany is well known and the course has been described so often in accounts of motor-boat cruises, I will not tell in detail of our journey to Albany, where we arrived on Thursday, after a leisurely trip of three days from the Columbia Yacht Club.

The next morning we went up to the Capitol early to secure our permit to go through the canal. The genial Deputy Commissioner of Public Works gave us many valuable hints as to canaling, the most important one being that the locks are connected by telephone, and we saw that there was not much chance of beating the four-mile rule without being caught and fined. Another valuable bit of information we picked up at the Albany Yacht Club was that lock tenders smoke, and are not adverse to receiving a cigar or two.

We hurried back to Themis to get her spars out and convert her into a launch. The steward of the Albany Yacht Club rigged a chain hoist from the top of the building and the mast came out in jig time.

We were under way again at noon and ran to Troy, where we stopped at a lumber yard and rigged the cockpit awning. Sloop lock was just ahead, and we ran over to the dam and waited our turn, as there was a boat coming down. I climbed up on the top of the lock and watched the way the crew of the Irene handled the ropes, and I can truthfully say I would rather have been outside of Jones' Inlet at low water in a good southeaster than about to tackle this lock. The water went out from under the Irene so quickly that she seemed to be dropping like an elevator. Just as they started to leave the lock something called the lock tender's attention, and he let go of the windlass without setting the dogs, so that the great gates started to close with the Irene half way out. They just grazed her stern as she went out clear. If she had been 10 feet longer those ponderous gates would have ripped off her stern the way a pair of pliers cuts off a piece of wire.

We were next in the lock, and after getting our lines fast the water came up with a swirl. Our bow went around, and we scraped up that entire 15 feet on our bowsprit. Afterwards we found out that this depended entirely upon whether the lock tenders liked you or not. If they opened all the wickets at once the boat would be banged around in great shape. If, however, they opened one wicket at a time, there would be no trouble at all. As one of the lock tenders explained to us, it is much easier when locking up to lay as near to the rear gates as possible and when locking down close to the forward gates.

The gates were now opened in front of us and away we went 10 feet above tide water up the upper Hudson River. A mile and a half further north we locked up again three times without any trouble, the lock tenders treating us with courtesy and consideration and giving us all the information in their power. Passed the lift bridge at Waterford and stopped at the collector's office to show our pass and get our clearance papers. We then ran on past Lock No. 7, where we laid up for the night, the lock tender selling us fresh eggs, a broiler and some milk.

We awoke to a glorious morning—one of those days that you consider it a privilege to be alive. Under way at two bells. After passing Lock No. 9 we passed the lively little village of Mechanicsville, where the bare-footed youngsters ran along the tow-path waving their hands at us. At last we reached the 16-mile level between Locks 10 and 11, where we opened up the throttle a little, as "Lathy" does not run well slowly. After passing numerous towns, we decided to stop for lunch at Wilbur's Basin, and also to make up our time, as four hours must be taken by each craft on this level. We took the "dink" to explore the basin, and, finding we had deep water, we ran in. Wilbur's Basin runs back at least 1,000 feet from the canal, and we landed at one of the most beautiful camping grounds I have ever seen. Upon exploring, we found the remains of a former camp with

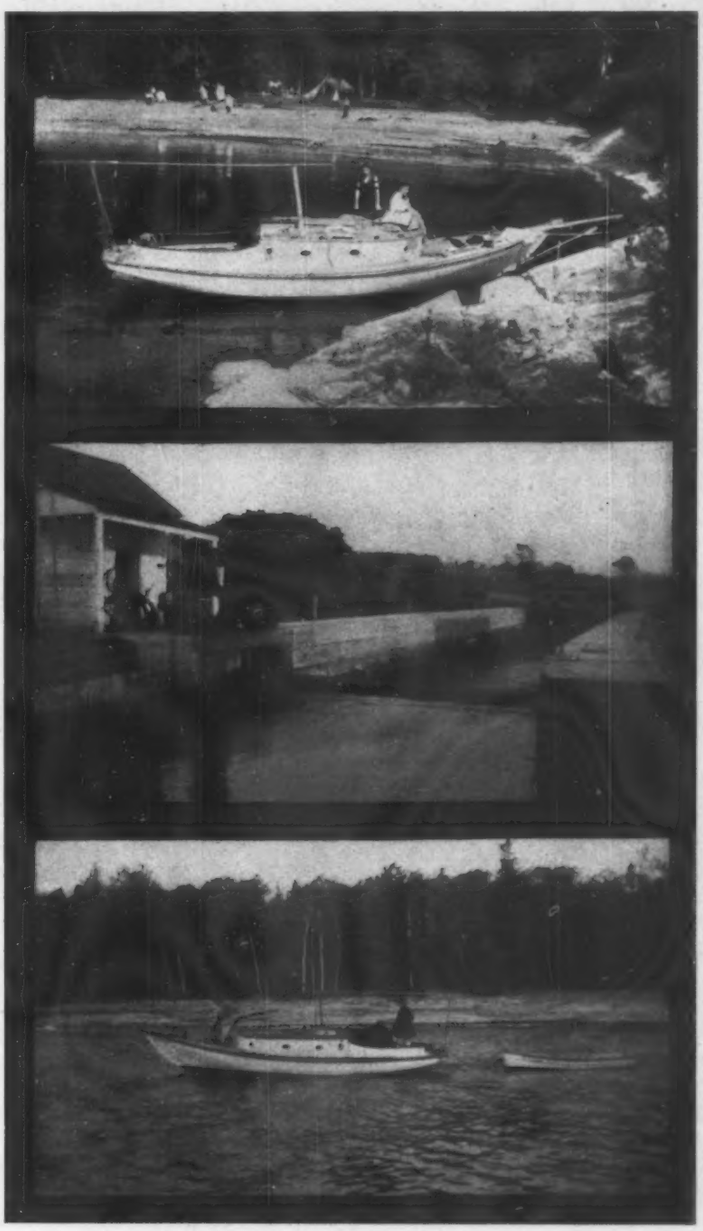
tables and benches, so we built a fire and proceeded to have a fine lunch "al fresco." Later, we took the dink up to the head of the basin, where we filled our water jugs and bought some green corn at a farm-house. Milk was four cents a quart, and as they seemed to think they were taking advantage of us at that price, they threw in a couple of quarts of string beans.

At one o'clock we got under way again and laid up for the night just past Fort Miller lock. As the next day would be Sunday, we decided we were entitled to sleep late.

Thus it was that we did not get under way until 9:30 A.M. We went on past Moses Kill lock, where there is a good general store, where milk, ice, and fresh vegetables may be procured. We were now near the highest point on the system, and soon entered Fort Edward lock, over 100 feet above tide water. At the little village of Fort Edward we stopped long enough to procure gasolene and cylinder oil, and were under way again at six bells. "Lathy" did not run well that afternoon and finally stopped altogether. The mate feared that we would have to make the girls get out and tow the boat, but the captain had compassion on them, and, being in the electrical business, finally located the trouble in a broken battery connection. We had planned to lay up at Whitehall, but were advised that the canal boats get under way at three or four in the morning and make sleep impossible after that hour, so we tied up at a farm-house about 2 miles this side of it.

Under way bright and early the next morning, and at eight bells arrived at Whitehall. Turned in our clearance to the collector's office, and received a pass out on to the lake. We went into the triple locks with a large New York Yacht Club boat. We got by all right, but the big fellow was just about 4 inches too wide to get by, and they had to lock him up again to the high level and allow him to back out. They must have had considerable trouble getting through, as they did not pass us for at least two hours after we were out on the lake.

Red buoys are left to starboard, as the outlet of Lake Champlain is at the extreme northern end. A government chart is a necessity, as the channel is very narrow, although well buoyed off. On past Cold Spring, Larabee's Landing and Fort Ticonderoga we went, with the engine working well. We had planned to make Port Henry our stopping place for the night; but darkness overtook us, and just north of Crown Point we ran aground going at full speed. A party of canoeists came out and showed us where the channel lay; but in backing off we caught the painter of the dinghy in our propeller, and as it took us over an hour to clear it, we decided to lay up for the night at Crown Point. We found a beautiful little sheltered cove off the Lake House in which to anchor, and turned in at five bells, after a long day.



IN SLOOP COVE, VALCOUR ISLAND.
ONE OF THE LOCKS ON THE CANAL.
GETTING THE ANCHOR AT VALCOUR ISLAND.

The chaperon and chaperoned did not arise until nine o'clock the following day. The captain and mate, after eating breakfast alone, painted the port side of the deck, in order to make the boat look shipshape by the time we reached Plattsburg. As we expected a money order here, we decided to go ashore, leaving the girls catching perch. We found the post office, but our expected money order did not materialize; and we found, upon taking inventory, that we had only 3 gallons of gasolene and $1.75 in real money. Gasolene is 20 cents a gallon here, so we decided to wait until the next day, in hopes of receiving that most necessary money order.

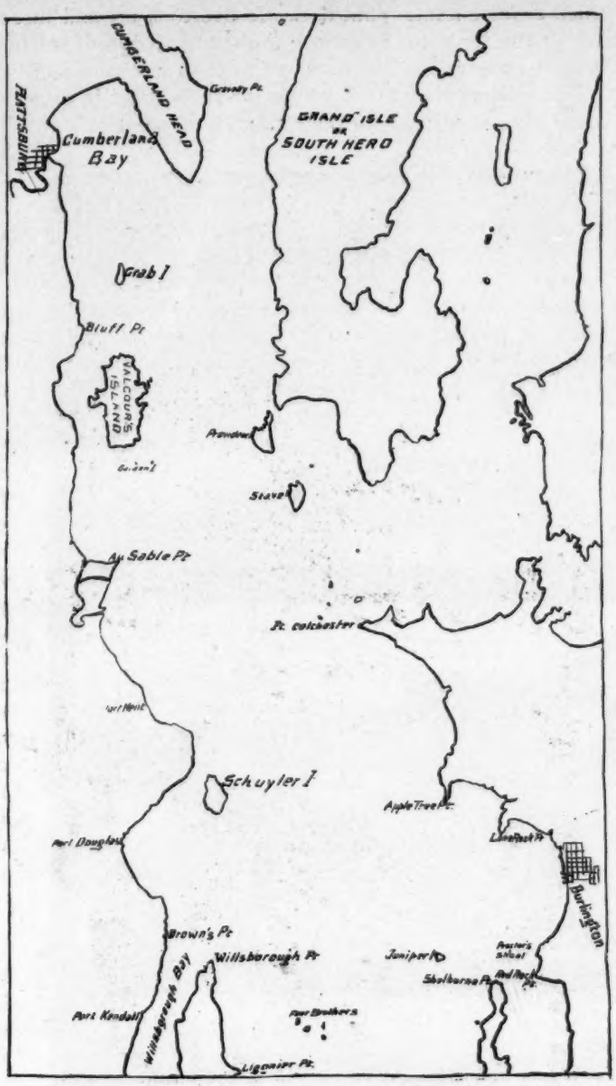
Upon our return to the boat we found that the girls had each caught one perch, but being afraid to take them off the hook had stopped fishing. So we donned bathing suits and all went in for a swim. While we were enjoying ourselves in the lake a couple in a row boat inquired for "the captain of that boat anchored out there." I pleaded guilty, and they asked what I would charge to tow them to Basin Harbor, which, they said, was about 10 miles north. Not being in the habit of renting Themis, I was not up on the prices for tow-boat service; but with only $1.75 and three gallons of gasolene one cannot be too particular, so I offered to tow them for ten gallons of gasolene, figuring that I would be five gallons to the good after the excursion.

After considerable dickering we got under way, taking some friends we had made at the Lake House with us. Upon laying off our course on the chart we found Basin Harbor was 22 miles away, and realized that we had not made such a good bargain as we thought. We were also in trouble with our friends from the Lake House, as we promised to get them back in time for supper, and as our start was made at four o'clock and Themis makes 7 miles an hour, it was easy to see that we would have seven more people to feed at supper time. On our way back we again found

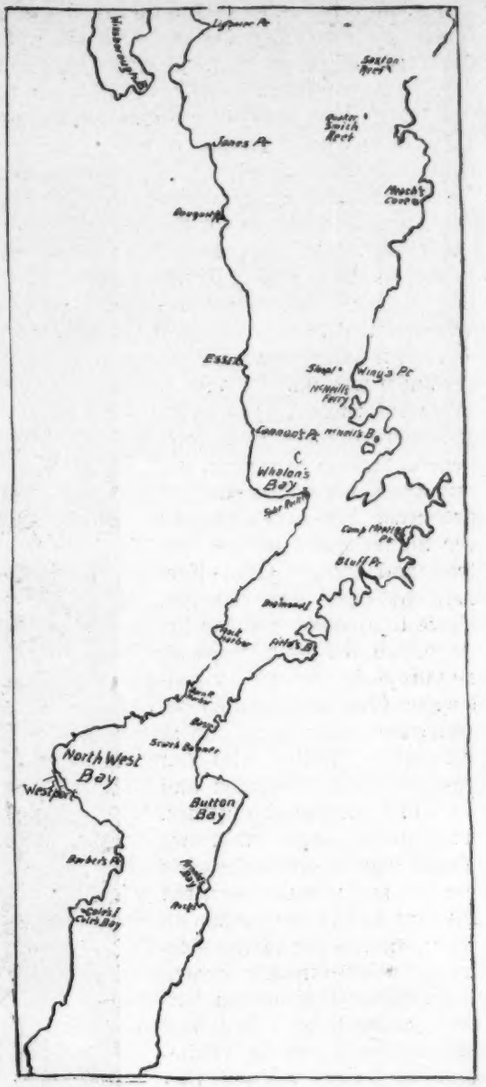
our friend the sand bar just north of the Lake House, and were compelled to send our visitors ashore in the dinghy, where they arrived just in time to save their anxious parents from hysterics.

Wednesday, August 5: A drizzling, rainy day, and as our money order had not arrived, we invested our last 35 cents in a telegram to the office. The chaperon and chaperoned were getting nervous and wondered if it were possible to starve to death in case we did not hear from New York; but we allayed their fears by explaining that a $1,000 boat is always good for many meals. We spent the day fishing and swimming, and really enjoyed the rest. Early in the evening the captain, while fishing for perch with a trout rod, hooked and landed an 8-pound pike.

The long-expected money order arrived the next day, and we got under way Friday, August 7, at 9 o'clock, bound north. We stopped at Port Henry and invested in a startling array of multi-colored spoons, which, we were informed, were unsurpassed for tempting the wary pike and pickerel. We laid up for the night in Thompson's Cove and had exceptionally good luck fishing.



UPPER PART OF LAKE CHAMPLAIN, FROM CUMBERLAND HEAD TO LIGONIER POINT.



FROM LIGONIER POINT TO COLES BAY.

Saturday, August 8: Under way again bright and early, and made the Lake Champlain Yacht Club at Burlington, Vt., on the east shore, where we filled our gasolene tanks. The Lake Champlain Y. C. is the largest on the lake. We were invited to register, were extended all the privileges of the club, and urged to stay over that night and attend one of their dances; but as a friend of ours had telegraphed us that he would meet us at Plattsburg on Sunday, it was imperative that we continue.

On arriving at Plattsburg late in the afternoon, we anchored between the docks, and, togged out in civilized clothes, started up to the post office, where we all received several letters. After spending the evening ashore seeing the town, we went back aboard late and turned in.

We spent the morning swimming, and later took a trip to the barracks. In the afternoon we ran south to Crab Island, which is the burial place of the soldiers and sailors who were killed in the battle of Lake Champlain in 1814.

After a half-hour's run from Crab Island we dropped anchor off Sloop Cove, Valcour Island. This is one of the finest harbors for small boats on the lake, being absolutely protected from all but east winds. A number of Plattsburg boys had a camp on the bluff here, and as they were going back to Plattsburg for a few days, they extended an invitation to the use of their camp until their return. We all enjoyed sleeping ashore that night, and real beds felt good after sleeping on yacht cushions for two weeks.

The fishing around Valcour Harbor was excellent. Our friend had brought a tent with him, so we made camp at Smuggler's Cove, which lies about a quarter of a mile south of Sloop Cove. Smuggler's Cove is not as well protected as Sloop Cove, and in a southeast blow is not a very desirable anchorage.

After spending several days here we once more turned northward. We passed Cumberland Head Light close aboard, then Sister Islands, Point Au Roche and Isle La Motte, and anchored for the night at Rouses Point, at the extreme northern end of the lake. The next day we ran on past the United States Custom House at the railroad bridge. At Fort Montgomery we stopped and went ashore. Here we tried to take some photographs of the interior of the fort, but the custodian refused permission, and we had to leave the camera outside.

We were now in the Richelieu River, which flows from Lake Champlain to the St. Lawrence. We ran on to Noyan, where we tied up at the disused steamboat dock. Here we spent a pleasant day, going over to Lacolle, across the river. This is a great apple country, and each year it ships thousands of barrels.

The next morning, with many regrets, we turned our bow homeward, and started on our long return trip. Following very nearly our route on the northward voyage, we arrived at the Bergen Beach Yacht Club on August 31, after a cruise lasting just five weeks.

The Housing of Motor Boats

KEEPING BOATS UNDER COVER NECESSITATES A MOTOR BOAT GARAGE—THE BEST ARRANGEMENT AND LOCATION FOR THE VARIOUS STYLES AND SIZES OF BOATS

By LAWRENCE LA RUE

IT is the common practice on most of the fresh-water lakes and tideless rivers to protect motor boats from the weather when not in use by housing them in some kind of a boat house or shelter. Especially with high-powered and finely-finished boats is this necessary, and along every large river or lake can be seen numerous boat houses, formerly built to accommodate a skiff or two, to which additions have been made for the housing of a power craft. Some have been converted into motor boat "garages" by cutting a slip in the boat house floor, while others have been changed to meet the new conditions by adding a small lean-to to the boat house proper. Although these latter are inexpensive to construct and serve the purpose of protecting the boat, they naturally cannot be so conveniently arranged as one which has been designed with the sole idea of providing a covering and a repair shop for one or more power craft.

AN ARTISTIC COVERING FOR MOTOR BOAT SLIPS.

It is not necessary, however, to own a boat house in order to provide an inexpensive place in which to keep a motor boat for the summer months, for a few iron hoops, a large sheet of stout canvas and a couple of solid piers can be made to serve the purpose of protection very well. It is to be assumed that any man owning a small summer cottage on some lake or river will at least have a substantial dock or pier on his water front, and if this projects far enough from the land so that the boat can be made fast alongside of it, with the bow pointing towards shore, he will have nearly half of his improvised shelter already provided. If the bottom is of mud or sand, it will be an easy matter to drive a few piles into the river bed in a row parallel with the end of the dock at which the boat is to be kept, and along the top of these to secure a stout timber. This piling should be placed about four feet farther from the end of the dock than the width of the boat, and should be braced as much as possible in order to prevent any damage by the ice. Of course a heavy pier with large cribs weighted with stone will be much more lasting, but we are considering for the present only the simplest and least expensive form of motor boat shelter.

To the inside edges of both the new and the old pier a pair of iron sockets should be screwed opposite each other about every four or five feet to accommodate the ends of the hoops. These hoops, or bows, can be made at any blacksmith shop out of a few lengths of sufficiently stout iron rod, bent so that the ends are as far apart as the distance between the two piers. The hoops should be long enough so that, when bent and placed in position in the sockets, sufficient head room will be furnished for the occupants to get in and out of the boat without inconvenience. It will be understood that these hoops straddle the open space of water between the piers and furnish the framework over which the stout piece of canvas is stretched.

The canvas may be attached by heavy lacing or by rings sewed into it at short intervals, through which the bows pass. If the latter are used, but one side of the canvas need be fastened permanently to the pier and the other left free, so that the whole covering may be slid back on itself. If there is no method of entering or leaving the boat at the bow end of the slip, this arrangement is necessary to make the craft more accessible. In lieu of this a good method is to place the sockets on the larger pier a few feet back from the slip and make the bows correspondingly wider, so that the canvas will accommodate the small platform thus furnished. This, however, will necessitate a greater amount of canvas and larger hoops and forms a slightly more elaborate and expensive covering than the one first described.

The slip is made some four feet wider than the beam of the boat, so that the latter can be secured in the middle of the opening by two lines at both bow and stern, giving her a little play, with no danger of scraping the sides against either pier—even in the roughest weather.

This form of shelter provides protection for the summer months only, and when the boat is put away for the winter, the hoops may be removed from their sockets, the canvas collapsed and the whole stowed in a remarkably small space. Even though absolutely waterproof canvas is not used for the covering, no rain can leak through this roof on account of the steep slope made by the hoops. By using substantial docks and including a generous portion of them on each side of the slip under the covering, this same scheme for a motor boat shelter may be carried out on a larger scale and a neat and attractive-looking boat house provided.

The man who spends his summer in a house boat will of course need a motor boat as a part of his equipment, and the problem of sheltering such a craft under these conditions is a serious one. An ingenious form of movable boat house, however, has been used on one of the large bodies of water where house boats are abundant, and has proved to be very successful. This is a canvas boat house, similar to the one described above, which, instead of being placed on stationary piers in the ordinary way, is supported on air-tight barrels and anchored near the shore. Two rows of a sufficient number of these barrels to give the necessary buoyancy form the floats to which the hoops for the supports of the canvas covering are fastened. When it is desired to change the location

of the house boat, the hoops and canvas may be removed from the barrels and all the parts stowed on deck until it is necessary to reassemble them.

On account of the location of the piers of the ordinary boat house designed to accommodate skiffs only, it is not, as a rule, good economy to cut a slip in the floor of the original structure for the use of a motor boat. New piers will probably have to be made and the work entailed will be as great as that required for the construction of a small addition. If the original boat house, however, was constructed with the piers at the front occupying the corners only and not extending across the whole width, a saw is about the only tool necessary to form a make-shift accommodation for a small motor boat. A change will probably be necessitated in the doors, for the sliding type cannot be used very well over a slip. On the other hand, if the lean-to is decided upon, the slip, operation of the doors and arrangement of the interior may be planned so as best to meet the existing conditions, and consequently for a comparatively small increase in expenditure a much more satisfactory boat house may be constructed than if a slip is cut in one already built.

The pile construction will hardly answer the purpose for the additional pier of the lean-to, and it will probably be necessary to build a crib of heavy logs, filled with stones, and allow the mass to sink through the mud and ooze of the bottom until a hard clay or rock bed is reached. If sufficient headroom will be provided, the roof may be an extension of that of the original structure, and the enclosing of the one side and two ends is a comparatively simple matter. Assuming that it is only a small boat that is being provided for, it is advisable to line the sides of the slip with planking to a depth of two or three feet under the water. This not only improves the interior appearance, but will also prevent the gunwale of the boat from catching under the projecting edges of the boat house floor if the water should recede a couple of feet.

Perhaps the man who does not already own a boat house is the more fortunate, as he is not tempted to resort to make-shifts and alterations for the purpose of converting an old boat house into a motor boat garage. If he is buying a good boat it will pay him to put considerable time, thought and money into the arrangement and erection of a suitable place in which to keep and overhaul it, for the ideal motor boat garage is not only a shelter and storage place for the boat, but is a repair shop as well.

The first point to be considered is that of location, and if one is fortunate enough to possess a water front facing in two or three directions, he should choose for the erection of his boat house that side which is the least exposed to the prevailing winds. The difficulty in entering a slip during a heavy wind, even with the boat under power, is one of the troubles with which the amateur operator will have to contend, and the advantages of a sheltered bay are most apparent. Bear this in mind, and many a scratch, bump and strain of the boat will be saved.

Depth of water is also an important consideration in picking out the proper site. Even though the boat may not have a draft of more than two or three feet, it is better to have four or five feet of water at the end of the slip in order to allow for variations in its height. Furthermore, any boat will run better in a deep channel than in but three or four feet of water, and the mud which may be kicked up by the wheel may interfere seriously with the operation of the motor by clogging the cooling system. A case is known in which "rily" water not only deposited sedi-

A SIMPLE COVERING FOR A SLIP BUILT IN A DOCK.
OLD BOAT HOUSE ALTERED BY ADDING LEAN-TO TO PROVIDE AN EXTRA SLIP FOR A MOTOR BOAT.

AN INGENIOUS ARRANGEMENT OF COTTAGE AND BOAT HOUSE WHERE SPACE WAS LIMITED.
THE LOWER FLOOR IS SOMETIMES USED FOR MOTOR BOAT SLIPS.

ment in the pump, but left several pieces of gravel in the outside hanger as well and resulted in a "frozen" shaft.

In planning the boat house and the space it is to cover, allow for plenty of dock area on both sides. Good, substantial docks, capable of accommodating several boats, are not only useful for the owner's craft in pleasant weather, but add to the appearance of the boat house as well. The advantage of having a dock on either side of the boat house will be apparent when a strong wind makes one side practically useless, and the other is then found well protected in the lee of the building. If practicable, it might be well even to build docks at the front of the boat house between the slip and the sides of the building. The inside corners of these docks—toward the slip—should be cut off, and thus form a sort of guide for the narrow entrance. If the edges of the dock abouts" to whatever he may already possess. The slips not in use may be covered with false flooring and no more space will be utilized than is necessary for immediate needs. A large slip forms a convenient place in which to run several small boats and skiffs, and even though no craft large enough to be called a yacht may be owned, a slip of sufficient size to accommodate one will not be wasted if the boat house has been made of ample dimensions. A pleasing exterior appearance and convenient interior arrangement is given to a large boat house by building the largest slip in the middle and making a smaller one on each side parallel to it. It is probable that any large pleasure craft will be provided with a signal mast, and in order to admit these a considerable portion of the front of the building between the slip and the roof will need to be cut away. Even a thirty-foot cruiser may be

A "GARAGE" WITH ROOM FOR A FLEET.
THE SIMPLEST FORM OF SHELTER. IRON HOOPS SUPPORTED BY PIERS AND COVERED WITH CANVAS.

A TWO-SLIP BOAT HOUSE WITH GOOD DOCK FACILITIES.
BOAT HOUSE WITH THREE SLIPS; ONE FOR A LARGE YACHT WITH MAST AND THE ONES ON EITHER SIDE FOR SMALLER BOATS.

at the point where the corners have been removed are covered with some thick, soft material, such as heavy rubber hose pipe or boat fenders, the pilot may almost "make" the slip with his eyes shut without much danger of damage to his boat, and will not have to trust to luck, as did the bibulous gentleman who, after a late session at the yacht club, was piloting his boat home and saw three slips. He steered for the middle one—and it *happened* to be the real one!

It is a good idea also to line the edges of the slip with hose pipe, so that the fenders will not have to be thrown out or let down every time the boat enters the boat house. This of course applies only to the smaller boats.

If it is desired to build a boat house to serve for any length of time, one or two extra slips should be provided, for motor boating generally obtains such a hold upon the enthusiast that he is almost certain to add one or more speed boats, cruisers or "run-

provided with such a mast, and if all the slips are made to admit such boats, it will be seen how the arrangement described above will not interfere with the slope of the roof, since the cut for the tallest mast will be directly under the peak of the roof and the smaller ones on either side graded down in proportion to the size of the boats they are to accommodate.

But the medium-sized boat house in which accommodations for boats with signal masts are not considered will probably interest the average power craft owner more. Such a boat house should be constructed with two stories—or at least a loft under the roof. This extra floor or loft may be used as an extra store room or as sleeping quarters, but, if possible, it is better to utilize it in some manner connected with the boat. If windows are cut in the ends to give sufficient light, a work bench may be placed up here and the loft converted into a general repair shop that will prove very useful. The extra space afforded, however, is not the primary

reason for advising the addition of this floor. When the boat is raised out of the water for the winter there will probably be many hot days before she is overhauled the next spring, and the sun, beating down upon the roof of the boat house constructed with but one floor, will so dry the atmosphere of the interior that the hull is liable to suffer in consequence by opening up of the seams. The flooring between the roof and the boat will serve to keep the atmosphere at a much more even temperature during the hot weather.

A small boat house will almost pay for itself in a few years by the saving in storage charges for the boat during the winter. All small boats should be raised high and dry and kept covered from the ice and snow of a northern winter, and about the cheapest that a boat house space may be rented in most sections for a period of seven or eight months is a dollar per foot of length. It is almost as expensive to pull the boat up on ways on shore and provide a canvas or board cover to protect the upper part and interior from snow and rain, and when overhauling time comes the advantage of being in your own boat house, where you can do your own work as you see fit, will be more than ever apparent. Thus it will be seen that the boat house should be provided with some means for raising the boat entirely out of the water. A light boat, such as a motor skiff or power canoe, may be slung from the rafters or beams overhead by tackles and heavy rope slings around bow, stern and amidships; but unless the tension and stretch of these supports is the same in all, the hull of the craft is liable to be warped or strained.

A larger boat must be raised in some manner, so that it will eventually rest on supports placed under the keel, and for this many boat house slips are provided with two, three or four sets of screw rods (depending upon the length of the boat) running down through the floor. These screws are composed of heavy threaded rods from one to two inches in diameter, one passing through each end of a stout six-by-six timber. This timber should be longer than the width of the ship, so that each screw may pass through the floor close to the edge. The timber and the two rods form a U-shaped piece with square corners, the parallel sides representing the rods, and the bottom the timber at right angles to them. The floor should be well supported at the points where the rods pass through it, as the entire weight of the boat will be distributed at these places. If a heavy nut is placed on the upper end of each rod and both of the nuts screwed *down*, the timber will be raised—slowly, to be sure, but with sufficient power to lift almost any weight. An iron plate should be placed on the floor around each rod, so that the underside of the nuts will have a smooth surface upon which to turn. When not in use the nuts may be unscrewed to the tops of the rods, so that the timber will rest at the bottom of the slip—or as far as the length of the rods will allow—and the screws will not then project too high above the floor.

For medium-sized boats having the motor located in the stern two sets of screws will probably furnish sufficient support. These should be so placed that the stern timber comes nearly under the engine, while the bow should project a few feet beyond the forward support, so that the distance between the two resting points will not be much over half of the length of the boat. Three supports are necessary for any boat having its motor located amidships, or otherwise the weight concentrated at the one point will cause either the center or one end of the hull to sag. In a case of this kind the boat should rest the heaviest on the middle timber, and consequently this should be kept screwed up a little ahead of the other two. When the boat is high enough the bow and stern screws should be raised, so that each sustains some of the weight—just sufficient to keep the hull from sagging at either end. Four screws will be necessary for a large boat, but it is impossible to give definite distances at which the supports should be placed, as so much depends upon the construction of the hull and the material of which it is made. For instance, a light racing craft would require a greater number of supports than a more substantially constructed cruiser of the same length.

After the boat is in position bilge blocks should be placed on either side of the hull, each cut to conform to the curvature of the boat at the point against which it rests. If this is done any side thrust or strain on the hull will be distributed throughout its entire height and any danger of a plank becoming loosened will be obviated. These bilge blocks are doubly necessary if the piers of the boat house are set on a muddy bottom, for uneven settling will so distort the screws and supporting timbers that the hull is liable to topple over unless braced in some manner. The breaking up of the ice in the spring may also cause a disarrangement of the supporting timbers. This method is hardly practicable to rivers liable to spring or fall freshets.

While the screw arrangement described in the preceding paragraphs may be used for raising the stern of the boat out of the water if it is desired to repair or replace the rudder or wheel, it is a slow and monotonous operation, which does not warrant the time necessary for it. No motor boat garage, however, is complete without some means of getting at the bottom of the boat quickly and easily, for under-water repairs are often made necessary—particularly if the rudder or propeller has come to grief on some log or shoal—and getting the boat sufficiently out of water is generally the biggest part of the job. Probably the best and simplest arrangement for raising the bow or stern of a boat out of water is the differential pulley, or "endless chain," as it is sometimes called. With this device a rope may be passed under the part of the hull which is desired to be exposed and a sling or saddle made, which can be hooked on to the pulley. This pulley is self-locking and will retain the weight in any position in which it is left until the chain is pulled in one direction or the other. After the end of the boat has been raised a sufficient height out of the water a heavy timber should be placed across the slip under the hull to relieve the strain on the rope saddle and provide against any possible accident.

Great care should be taken in selecting the overhead support to which the upper end of the pulley is fastened, and it is seldom that any of the rafters will be found strong enough to bear this extra weight of the boat. Provided there is no overhead timber stout enough to support the weight of the boat from the pulley a collapsible framework may be made, which will oftentimes prove to be a most convenient appurtenance. This framework consists merely of two upright six-by-six supports placed on either side of the slip, and a cross-piece—also a six-by-six—resting on the upper ends of these columns. A heavy, wrought-iron eye should be bolted to the cross-piece in the middle, and in this the hook of the upper pulley of the differential may be placed. The uprights should be fastened to the rafters for supports or be properly braced. The cross-piece may be fastened to the rafters of the roof, so that it will remain suspended in place when the supports are removed, these latter being used only when the timber is to carry any additional weight.

This arrangement of a cross-piece upright and the differential pulley may even take the place of the screws for raising the boat for the winter, and any danger attendant upon the shifting or settling of the boat house may be eliminated entirely. When used for this purpose the stern should be raised first and a heavy timber placed under it, resting on the opposite sides of the slip. The framework may then be shifted forward and the bow of the boat raised and supported in the same manner. This may of course strain the hull somewhat if the motor is located in the center of the boat, but the time would be so short before a timber can be placed under the midship section that the damage done, except in the lightest of construction, is almost negligible. The writer has found this arrangement of the timber framework and

(Continued on page 362.)

Putting the Boat in Commission

THIS is a subject that bobs up about this time each year and, for one so ancient, it manages to preserve each season a comparatively youthful appearance. It reminds one, in fact, of the ancient lady of the ballet. Probably this strong family resemblance may be accounted for by the amount of paint involved in both subjects.

At any rate, it is a subject that every reader of the paper eagerly peruses. The experienced ones, because they desire the satisfaction of ascertaining how much more they know about it than the writer, and the novices because they hope against hope that they will strike some stunts that will enable them to come out ahead of the hard-hearted boatbuilder, who has taken their craft on "storage only," and, with malice aforethought, has put it in the most inaccessible portion of the yard, and then followed up the isolation policy by serving notice of "no strange workman will be admitted to the yard."

Just before the editor left town to buy a new boat he requested me to fill about two pages on this thrilling subject. I told him it wouldn't need two pages; in fact, it wouldn't take two paragraphs, as the very best and the soundest advice I could extract from my system, based on experience that had cost me time, money and badly frayed knuckles, was to "hire somebody to do it for you." The editor said this wouldn't do; it was against all traditions of marine journalism; that there were two pages to fill, and as I hadn't been doing much lately, it was up to me to fill in. So here goes.

NEW EQUIPMENT FOR THE BOAT

If you happen to be one of those fortunate individuals with a good-sized cabin cruiser and several years of experience behind you, you do not need to be told much. If, however, you are the proud possessor of an open boat, running anywhere from 14 to 25 feet, and she happens to be your first craft, you have no doubt discovered many little things that would add to your comfort and convenience during the next season.

For instance: You may not have altogether appreciated the beautiful simplicity of the arrangement of a milled edge cap projecting about an inch from the deck to cover the receiving end of the gasolene feed pipe, and have probably come to the conclusion that a flush plate with a key would save some of the cuticle on your hands, or damaging the aforesaid cap with a Stillson wrench, because caps of this pattern invariably stick twenty-four hours after they get out of the boat shop.

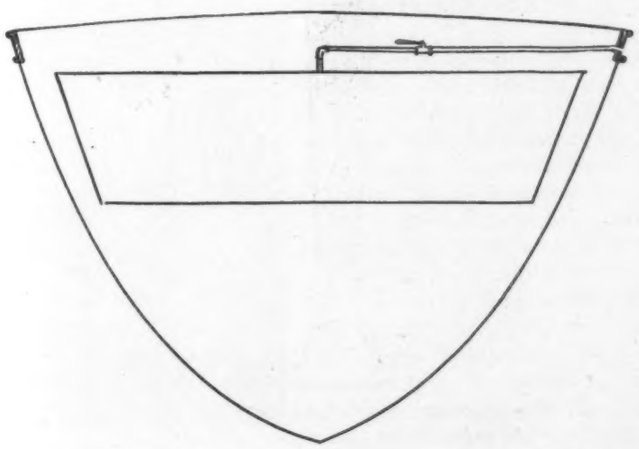
If you have a tank in the bow, the best way of fitting the vent is to solder a nipple in the top of the tank, connect it with an elbow, and run a pipe line of ⅛-inch-outside-diameter copper tubing right across to the wash strake at the side of the boat. Countersink the hole where the pipe comes out through the planking, and flange out the end of the piping to spread around the base of the countersink. This will make it an easy job to scrape the planking down at any time without damage to the tubing.

The pipe itself should be divided in the center and connected up to a spring key gasolene cock. This enables you to control the vent and prevents undue evaporation, and the vent will be large enough to prevent the tank becoming air-bound and the precious gasolene flowing up around the deck plate when you are taking on a cargo of fuel in a hurry.

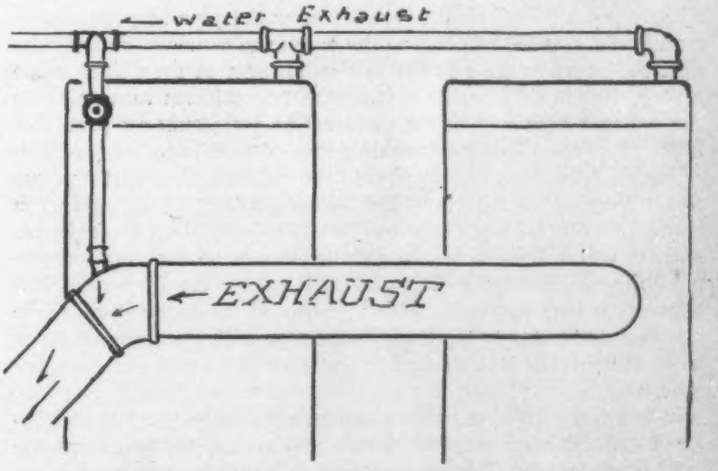
If you have a water-cooled exhaust, it is ten chances to one that, even though the cylinder jackets and the muffler were drained when cool weather came on, there was always water in the lowest part of the exhaust pipe. Now is the time to put a drain cock at this lowest portion of the piping. If, for any reason, it was necessary when laying up to uncouple that portion of your exhaust piping that was below the cockpit floor, and you didn't particularly enjoy the task of getting the planking up, owing to the fact that it was nailed, when you come to put it down again this year, fasten those planks which cover the pipe line with brass screws.

If there is sufficient material in the deadwood to stand it, rebore it, set a brass sleeve around your propeller and put on an inside stuffing-box. The joy that you will experience from knowing that you can repack your stuffing-box without going overboard or hauling the boat out will more than compensate for the cost and trouble. Have this bored out, however, by a man who knows his business, and stand over him while he is doing it, to see that he doesn't use a hot iron on the job. This hot-iron business is what cracks the deadwood and causes more leaks than almost any other one thing that can be done to that portion of the boat.

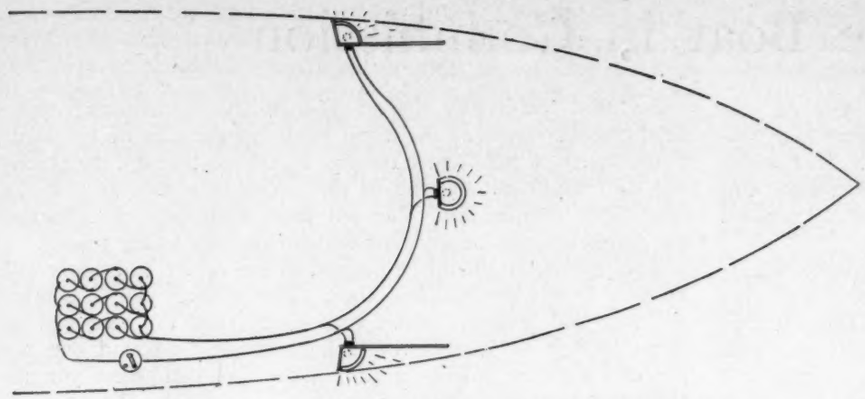
If your boat is of the so-called family runabout type, with the engine somewhere near the center, and you have only had one steering gear the past season, you are probably thinking seriously of putting in a side steerer, so located that you can attend to steering with one hand and handle spark throttle and reverse mechanism with the other. Do not indulge in one of the little 5 and 6-inch steering wheels that you have to revolve about fourteen times before you make any impression on the rudder, and, incidentally, do the revolving by main strength and awkwardness, because you are shy of leverage on the job. Get just as big



VENT PIPE LEADING THROUGH SIDE OF BOAT AND CONTROLLED BY SHUT-OFF COCK.



TAKING WATER FROM CIRCULATING SYSTEM TO COOL EXHAUST.



WIRING DIAGRAM FOR ELECTRICAL LIGHTING OF BOW AND SEARCHLIGHT.

a wheel as you can procure that will give you a clearance between the top of the cushion and the rim of the wheel.

If the side decks are not too wide, and it is possible to use a wooden lever without bringing out the tiller rope too far, a home-made side steerer may be easily made which will give every facility in the way of leverage, and be very simple and inexpensive to make. The main thing to be guarded against, however, is creating too much of a horizontal angle on the tiller rope, thereby increasing the friction.

If you have been troubled with the alternate slackening and tightening of the tiller rope, due to the difference in angle of the ordinary tiller with reference to the after sheaves, you can make a much more satisfactory arrangement by the substitution of a quadrant for your tiller; only be careful in making the substitution to see that you have selected a quadrant with a good, deep notch. If the tiller rope has worked hard during the past season and has considerable drag to it, look to your sheaves. If these are small, that's where a great deal of your trouble has probably been. Remember that the bigger the sheaves you use and the fewer right angles there are in the line of your tiller rope, the easier the steering wheel will operate.

If it is possible to do so without spoiling the looks of the boat, have a good big hand-hole plate—one of the keyless arrangements is good, though a small, square hatch is better yet if you can manage it. Go over your tiller line carefully. If it has frayed, you'll find these spots where it has gone over the sheaves, and if it shows very hard wear there, and the boat has been used but one season, you will know that the sheaves you have been using are too small.

Perhaps your engine was not fitted with a water-cooled exhaust, and you have had trouble at times with your exhaust piping becoming too hot. This is a good time to remedy this annoyance. Simply put a "Tee" on the line of the outlet pipe of your water-circulating system, as close to the engine as possible, and re-connect the overflow pipe to the horizontal arm of the "Tee" while a short length of pipe leads from the vertical arm to a point on the exhaust pipe just below the level of your exhaust port, this latter precaution being to avoid danger of flooding.

Put a globe valve on the line to the exhaust pipe, just as close to the vertical arm of the "Tee" as possible; this will give you control of the amount of water that is injected into the exhaust, so that you will have just the right amount to cool the exhaust gas without undue flooding and back pressure. In making the connection between the overflow pipe and the exhaust pipe, the simplest method is to tap the exhaust pipe with a sufficiently large hole, that it may be threaded for a bushing to take the overflow pipe.

When you started out last season you probably had a moderate-sized collection of tools, to which you added bit by bit as the season advanced. They were beautifully nickle-plated, glued or case-hardened, and looked "real swell" when they came into your possession. What they looked like at the end of the season, despite all your care, was a different matter entirely.

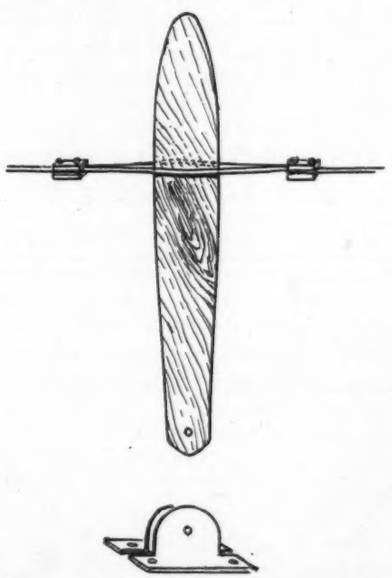
A boat is a damp place at best, and anything in the tool line kept aboard won't stay bright very long unless it is stored in an air-tight place. Great minds have from time to time evolved plans for the construction of tool boxes that will hold a tool equipment air-tight, and working drawings thereof have been studied with admiration by most of us at some time or other.

A really air-tight tool box calls for a great deal of mechanical ingenuity, lots of time, and, when it is made, considerable locker space—as a number of us have found out by experience. The real solution of the difficulty is so absurdly simple that most of us have entirely overlooked it.

Here it is: Carry the tools in a canvas tool roll, and carry the tool roll, in turn, in a waterproof canvas bag with a draw string in the neck, and after drawing the neck up tight, take a couple of turns of the draw string around it. This is the kind of arrangement in which a canoeist carries his clothing, and I have seen such a bag float half a mile down-stream after a capsize and be rescued without an article it contained touched by moisture. In addition to being effective, the arrangement costs but little.

If you did much night sailing last season, no one knows better than you do just what an unmitigated nuisance those oil lamps were. They smoked like a stag dinner, and lots of times after you had lighted them the snap of the fount springing into the socket put out the light. So this season you are probably in a position to appreciate a set of acetylene or electric illuminating sailing lamps. If you don't want to go to the expense of buying an entirely new lamp outfit, you can utilize your present lamp equipment by the simple expedient of purchasing a set of small acetylene burners, or incandescent lamp sockets which are made to interchange with oil fount burners. Then, in case of anything going wrong with the electric circuit, or running out of acetylene gas, you can fall back on kerosene as a last resort.

By the simple method of punching a hole in the metal back of your side and bow lights and bushing the hole with a brass bush-



HOMEMADE SIDE STEERING LEVER AND TWO BASE PLATES. THE DEVICE MAY BE INSTANTLY REMOVED OR PUT IN OPERATION.

ing, to take either electric wires or a rubber gas tubing, connection is easily made between your light wiring or acetylene tubing, and in event of using the lamp with kerosene, these bushings can be plugged with small corks.

It isn't even necessary to-day to generate acetylene gas or have a dynamo or storage battery to furnish your electric light, as acetylene gas may be procured in tanks carrying from 125 cubic feet up, and measuring in the smaller sizes 10 inches diameter and 30 inches long and weighing 100 pounds.

The smallest size of acetylene storage tank is sufficient to run a set of four sailing lights, each with a ⅛-foot burner, giving a light of 6 candle-power for 250 consecutive hours, at a cost of 1¼ cents per hour for gas, and the tank, when empty, may be exchanged for one fully charged. Run a line of ⅛-inch copper tubing gas pipe along the ceiling just under the deck with "Tee" connection and burner nipple with which to connect up with the short length of rubber gas tubing, which latter may be stowed away with the lamp to which it is attached.

The electric lights may be run by dry cells. This may seem a wasteful and costly proposition at the first blush, but it isn't when you come to figure it out. Three 2-candle, 5-volt Tungsten incandescent lights, each drawing about ¼ ampere of current, can be run on a four-cell dry battery for about ten hours at a cost of little over ten cents an hour. If, however, three sets of four dry batteries, connected in multiple, are used, they will have an initial amperage of from 60 to 75, and will furnish sixty to seventy-five hours' service.

Such a battery set may not only be utilized for electric lighting, but also to operate the electric signal and, by means of small connection plugs fastened to the lamp wires, be instantly connected or disconnected from the lights. By using 5-volt lamps with the 6-volt battery, there will be a margin left for the drop in voltage due to the resistance of the wiring of the circuit. Special care should be used to obtain lamps adapted to dry battery lighting (G8 bulbs), with candelabra, *not* miniature, sockets.

In order to reduce the resistance as much as possible, use No. 12 rubber insulated wire. Carry the wiring around on porcelain cleats so that it does not come in contact with the ceiling, and put a switch between one of the battery terminals and the first lamp. For this system, a set of the small rubber connections, such as are made to fasten to automobile dashboards, are a great convenience.

With these, one for each lamp, screwed to the ceiling just under deck and permanently connected up to the trunk wires, and the plugs connected to the loose lamp wires, connection may be made in an instant, and there will be no loose wires hanging around when not in use.

Some Points on Fitting Out

When it comes to the outside of the boat, ninety-nine men out of a hundred have had experience in the work necessary for putting her into commission and know how to clean her and get her ready for the coat of white or black, and how to mix the paint that they apply. However, the following suggestions may be of value not only to the novice who is putting his first boat into commission, but to those who, having had experience, may find that there are other ways of doing the work than they have always done, and that some of these may be an improvement on the old way.

CLEANING AND BURNING OFF

The first thing that should be done is to see that the boat is thoroughly cleaned out inside. This is properly work that should be done in the autumn before, when the boat is hauled out; but if it has not been attended to then, one should see that the floor boards are taken up and the accumulation of dirt and slime in the bottom of the boat is thoroughly cleaned, and any iron work, such as floor straps, bolt heads, etc., is given a coat of red lead, so as to make the bottom sweet and clean. While doing this one should look carefully at the condition of the frames, and if it is a centerboard boat, look for signs of decay at the base of the centerboard trunk logs, and for any sign of worms or borers, which have a pernicious habit of getting into boats, particularly of the centerboard type. If a boat is kept well painted with copper paint outside, worms should not get into the wood; but in the case of centerboard boats, it is impossible to paint the inside of the trunk, and the wood there is apt to offer a fruitful field for the tenacious borers. If there is any ballast in the bottom of the boat, it should be removed, whether it is in the form of pigs, slag or old junk. Put it aside where it can be washed or scrubbed with an old broom, so that it may be put back clean after the inside of the boat has been cleaned out.

WITH A PAINTER'S BLOW-LAMP AND PUTTY KNIFE THE AMATEUR UNHESITATINGLY TACKLES THE HULL OF HIS BOAT.

The outside of the boat is the next thing to be looked after, and if the surface is not smooth or the paint has been badly broken the preceding season, it would be well to burn the paint off to get down to the wood before repainting. A great many amateurs shy at the job of burning off a boat on account of the labor it entails, and unless one has plenty of time on his hands it is, perhaps, best to leave this part of the work to a professional painter, as it not only requires time, but is a dirty work and takes lots of muscle. The majority of amateurs do not know how to use a painter's torch, and the results are often unsatisfactory, the wood being scorched and blackened and the paint not taken off evenly. The principle of the painter's torch is fairly well known by men who use blue-flame kerosene stoves for cooking, and it is not necessary to tell how to light it.

In applying the torch, one should hold it in the left hand, directing the flame against the paint, while with a wide putty knife in the right hand the paint can be easily scraped from the wood as it curls up and softens under the heat. One should not try to work too rapidly, and should be sure of going down to the wood each time, keeping the flame on the surface until the paint is well softened. Hard woods are easy to work upon, but cedar is more difficult, on account of its softness and the splinters that are apt to be raised.

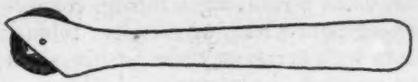
CAULKING

After the paint is all off and the outside smoothed down, it is well to look over the seams carefully, looking for soft spots that need recaulking of fresh putty. It is well to test each seam with a putty knife as you go over it. It is not necessary to recaulk a boat every spring, and if a boat has not dried out too much,

most of the seams will be hard, and a little putty will be all that is necessary. If the cotton has any life left in it, it is only necessary to work some putty into the seam and go over it with a flat knife, as the seams will swell when the boat goes overboard. If the cotton has been in some time and is brown or black and soft, and hangs out in places so that the putty knife sinks well into the seam, it is time to recaulk. A number of boats are spoiled each year by being caulked too often and too hard. Wood will always swell when it goes overboard, and a seam should not be stuffed too tight in caulking. To recaulk thoroughly, it is best to get all the old cotton out, cleaning the seam well with a knife. If the seam is too tight to be cleaned with a sharp knife, open it by running a caulking wheel along it, or by driving in the caulking iron here and there along its length. For small boats, cotton caulking is preferable to oakum, as the latter is too coarse. To do the caulking, you must have a mallet and a couple of caulking irons, or a small caulking wheel made of brass or steel, set in the end of an oak handle, that will roll into the seam. This is only suitable for small boats, however. Drive in the caulking well at the beginning, and keep twisting it as you drive it in. For small boats, cotton caulking comes rolled in ball form, and is very handy to use. If the seams are small and uniform, a long thread of cotton may be twisted and laid along them and then rolled into them with the wheel, so that it is about a quarter or three-eighths of an inch below the surface of the planking. If the seams are large in places, a thin caulking iron must be used,

USING A CAULKING WHEEL FOR PAYING A SEAM WITH COTTON.

and the cotton, instead of lying in a straight string, should be drawn back to form a little loop, so that more of it can be forced into the seam. Drive it in at several places two or three inches apart along the seam, finishing it up by driving it all along.

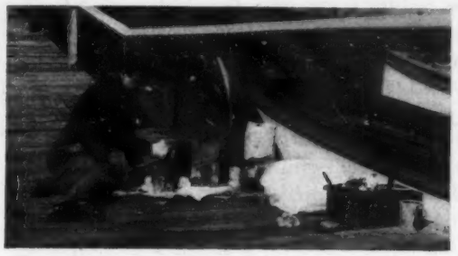


Caulking Wheel.

After finishing, put plenty of thin paint on the cotton to keep the water out of it, then putty all the seams with white lead, forcing it well in.

While going over the outside of the boat, it is well to look at the garboards to see whether they show any signs of decay, and it is always well to have a new plank put in before it has gone too far with rot.

Painting



After a boat has been burned off, or on a new boat, a greater number of coats must be put on than when a boat is painted over old coats. The first, of course, is a thin priming coat, and should be spread on thinly. Two or three coats should follow this before the finishing coat is put on. For this last coat a good mixture, if a dull surface is desired, consists of the following: 50 pounds of white lead, 2 quarts of raw linseed oil, 1 gallon turpentine, about a pint of drier.

If a glossy finish is desired, a light varnish must be mixed with white lead and thinned with turpentine. Nowadays, however, when such good ready-mixed paints can be obtained, it is very seldom necessary for the amateur to mix his own paint. Prepared paints are reliable, and, if bought from a reputable firm, contain good materials. There are all grades and all kinds of finishes, from a dull "yacht white" to a glossy enamel. The latter now comes in prepared forms and is easy to apply.

On boats that have previously been painted, be sure that the surface is smooth, dry, hard and clean. If the old paint is in fair condition, remove all loose paint or scales and sandpaper with No. 1 sandpaper, rubbing with the grain of the wood or from bow to stern. Then apply one or two coats of enamel paint as required. If two coats are applied, allow at least five days between coats. The yacht may be put into the water in three days after the paint is applied, as the water hardens it.

On a new yacht which has not been painted, apply four coats of lead, as usual, finishing up with enamel, brushing it well out. It will show no brush marks.

For bottom paint, the prepared copper or bronze paints which are on the market are the only thing to use. All iron work below the waterline should be first given a coat of red lead before the bottom paints are applied.

In the matter of brushes, it is best to get those of good size and have them good enough so that you can do satisfactory work. It will be found a good plan to have a brush for each color of paint used. For ordinary work, the round brush is usually found to be the best. Nearly every man thinks he can paint, but it is often easy to tell an amateur's job when it is finished. This is due to the fact that he does not paint evenly, but gives the brush a slap or two in a pot of paint and brushes it on the wood. Where the brush first strikes the surface there will be a thick spot of paint, and when it is empty the paint will be correspondingly thin, because the paint has not been well rubbed in and thinly applied. It is better to put on several thin coats than one thick coat, as the result will be a better surface. This is what the painter calls "brushed out." Experienced men will often put on four or five

coats of paint, and yet the total amount of paint used will not be greater than those who think two coats is sufficient, and put it on thick.

Where a boat is not burned off, it is well to go over the paint with sandpaper, smoothing it off well and washing out any stains that may be on the old paint.

PUTTYING SEAMS AND PUTTING ON PRIMING COAT.

VARNISHING

Varnish cannot be burned off as paint, but must be scraped down with the scraper, first softening with varnish remover. This can be bought at any paint store, or can be made by dissolving 10 cents' worth of oxalic acid into fresh water, making a saturated solution, with as much of the acid as the water will hold. After the varnish is off, scrape off the wood until perfectly smooth, and then put on the varnish as soon as possible, for oxalic acid, which is the basis of most varnish removers, will leave a black stain if water falls on the wood before the coat of varnish is applied. Several coats of varnish should be applied to get a good surface, each coat being rubbed down with fine sandpaper or curled hair before the next coat is put on. A priming coat of shellac will often be an economy, as it makes a good priming coat, and two coats of varnish over this would give a fine surface. Shellac dries almost immediately, and thus the wood is preserved and kept right until the varnish can be applied.

The Song of the Ocean Tramp

The wanderlust runs in my blood, an' I'm feelin' kinder blue,
While a sort o' vacant longing seems to pierce me thro' and thro';
There's a hungry wish in all my bones, an' my lungs feel cramped and small,
And I long to be west o' the Farralones, for the sea has made her call.

I am sick and tired of these blinding hills and acres o' grape an' vine,
Oh, how I hate the hoe an' spade, an' the smell o' the new-made wine!
I have no love for the earth and flowers, or the bloom on the orange tree,
For I long to be out where the sun descends, on the heave of God's blue sea.

I have overhauled my old sea chest, my boots and dungaree,
Needles and palm, sou'westers an' caps, out o' all that belongs to me.
I gaze at my truck as I lay them out, an' my mind a-wandering goes
Thro' the calm and strife of the sailor's life, from the line to the Cape Horn snows.

Give me the slope of a good ship's deck under my feet again,
The roar of a gale, the clutch of a sail, and the swish of the deep-sea rain,
The fo'c'sle song, and the chanty strong, and the shipmates bold and true,
With the heave and haul at the capstan pawl, and the stamp of a hearty crew!

The smell of the tar and the good ship's jar, as she pounds on the racing seas,
With her sails trimmed free, and the old man's glee, as she snores to the trade-wind breeze,
The whirling log and the deep-sea fog come back in my reverie,
And my mind is made,—I'll leave the spade, and break for the deep, blue sea.

Ho! for the smell of the salt sea air and the force of the strong wind's tide,
And the clutch of the wheel in my hand to feel, and the souse of the wash o'erside!
Ho! for the sight of a tropic night and the rags in the moonlight pale,
And the surge and grind in the snow squall blind, with the hate of the Cape Horn gale!

I'll pack my kit, and the valley I'll quit, an' tramp for the port once more,
An' stick my fist on a ship's crew list, as I did in the days of yore;
For a "windjam" trip on a lime-juice ship, or a well-fed Downeast bark,
Is a sea tramp's cure, and I'm darn well sure 'twill suit me to the mark.

FREDERICK WILLIAM WALLACE.

THE NORTHPORT YACHT CLUB HAS A FINE ANCHORAGE ON A WELL-PROTECTED BAY.

The Yacht Clubs of Long Island

PART II—SHINNECOCK BAY AND THE NORTH SHORE

By LOUIS DE CASANOVA

AFTER leaving the new Islip Yacht Club, in the Bay Shore district, and before entering Moriches Bay, there are to be found to the eastward the two remaining clubs of Great South Bay. One is situated at Patchogue, and is called the South Bay Yacht Club, and the other is the Bellport Bay Yacht Club, that has its headquarters at Bellport. Both are progressive organizations. Each has its own class of one-design boats, that furnish racing equally as good as that of the one-design class of either the Islip or the Babylon Yacht Clubs. The South Bay Yacht Club is situated on Patchogue Creek, and has an excellent anchorage. The club has been going in for motor boat racing, and last season gave a regatta for screw-driven craft that was a decided success. The South Bay yachtsmen claim that they have the greatest motor boat course in the world, and with such a splendid sheet of water in front of their club-house, it indeed will be surprising if the Patchogue motor boat races do not equal those in any other section of the country.

Although not organized until 1906, the Bellport Bay Yacht Club is one of the most progressive organizations on Great South Bay. The cruising skipper will find that it has not only a comfortable little club-house, but also a club station on Old Inlet. There is now a plan on foot among the Bellport Bay members to build a new club-house on the strip of land that lies between the bay and the ocean. The building will be used as another summer station, and will give the club an excellent bathing beach.

At this organization will be found many exceptionally clever racing men, who, next to sailing in a regatta, find their greatest pleasure in thrashing out the rules, the ratings and the time allowances of their craft. Their regattas are numbered among the best on the bay, and are exceptionally popular with the rocking-chair sailors, as the triangular course of the organization lies directly in front of the club-house, and furnishes a splendid point from which to witness the contests. Bellport Bay regatta days are numbered, therefore, among the red letter yachting days on Great South Bay.

A narrow channel leads from Great South Bay to Moriches Bay, on which will be found the first of the clubs that make up the Yacht Racing Association of Southeastern Long Island. From Moriches it is possible to continue on into Shinnecock Bay, the last of the great bodies of water that lie on the south side of Long Island. The organizations on these waters are almost all summer yacht clubs that go into commission on July 4 and haul down their burgees on Labor Day.

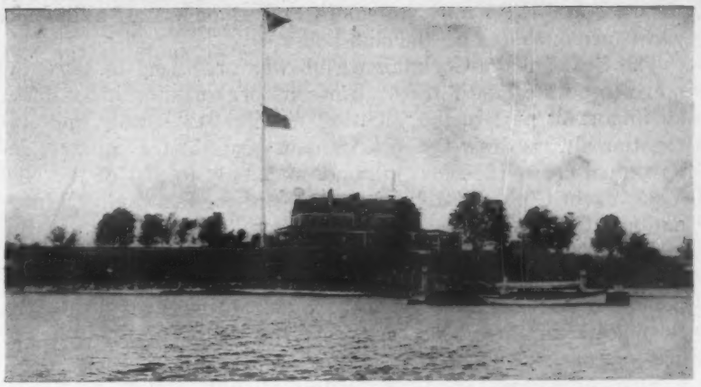
Located on the two bays will be found five clubs of importance, and these organizations form one of the most enterprising yacht racing associations on Long Island. The most progressive is the Shinnecock Yacht Club, which has a comfortable home and a well sheltered anchorage at Quogue. This organization founded the Yacht Racing Association, and always has been very prominent in the racing game. The Shinnecock Club was organized in 1887 and incorporated three years later. Its object was to encourage the racing of small boats, and although it has grown into a very large organization, the Shinnecock tars are proud of the fact that they are still a racing club. The Shinnecock burgee flies from more than fifty yachts, and almost all of these are windjammers. The club is a strong believer in one-design racing, and during the past few years has given many races for these boats.

If the cruising mariner is wise, he will drop anchor in the sheltered harbor of the Shinnecock Club early in August, for during that month the club gives an association race week that attracts almost all of the boats on Moriches and Shinnecock Bays. As is the custom at other organizations during a race week, there is plenty of fun at Quogue during the annual fixture of the Shinnecock Yacht Club.

The Shinnecock burgee, however, is not the first flag the cruising mariner will see after passing Smith Point, at the southeasterly end of Great South Bay. Directly opposite Masury Point will be found the Moriches Yacht Club, an organization founded in 1898, but not incorporated until 1902. The club-house is situated at Center Moriches, and it is the home of an organization that gives an interesting series of races throughout the summer for both sail and power craft.

SHELTER ISLAND YACHT CLUB.

Still sailing eastward are to be found the yacht station of the Westhampton Country Club, another member of the Yacht Racing Association of



THE BEAUTIFUL SEAWANHAKA-CORINTHIAN Y. C. AT OYSTER BAY.

Southeastern Long Island. This club, organized in 1893 and incorporated in 1898, has its station on Westhampton Beach. The Ponquogue Country Club is a similar organization that has a yachting department, and the fifth and last club of the association is the Quantuck Yacht Club, which also has its headquarters at Quogue.

To reach these clubs in a large boat is impossible. Little fellows, however, continually make the voyage throughout the summer. Past Westhampton Beach and into Quantuck Bay lies the course, and then through a short canal, by Hampton Beach, into Ogden Pond, and then into the broader waters of Shinnecock Bay. This sheet is the last big body of water that lies on the south side of Long Island. It is both large and deep enough to furnish good sailing for little craft, so the cruising yachtsman should have no difficulty in rounding Ponquogue Point, upon which stands Shinnecock Light, and sailing towards the mouth of the canal that joins Shinnecock and Great Peconic Bays.

Once through Shinnecock Canal, and the voyage around the Island is half over. Great Peconic Bay is the first of the great bodies of water that lie on the north side of Long Island. Unlike the south shore bays, these big land-locked harbors are both large and deep, and furnish the best of sailing for all but the big sloops and schooners.

The only club of importance on Great Peconic Bay is situated at South Jamesport, directly across the bay from the entrance to the Shinnecock Canal. About northeast is the course to a commodious and well sheltered anchorage in the horse shoe off South Jamesport. The organization is the Great Peconic Bay Yacht Club, incorporated in 1907. Although a member of no yacht racing association, the club holds regattas throughout the year, besides a special weekly series for both its one-design and its handicap classes. Although a young club, the Great Peconic Bay organization is a most progressive one, and already has enrolled many well-known sailors, besides an excellent fleet of both power and sail craft.

It is a delightful sail from South Jamesport to the home of the next important Long Island yacht club. The course lies still to the eastward, across Great Peconic Bay, between Robins Island and Cow Neck, thence around Little Hog Neck and into Little Peconic Bay. Across this sheet of water, to the northeast, lies Shelter Island, the home of the Shelter Island Yacht Club. To reach this famous summer resort it is necessary to pass between Jessup Neck and Cedar Beach Point, around Paradise Point on Great Hog Neck,—a spot that no yachtsman passes without eating one of the shore dinners for which Paradise Park is famous,—across Southold Bay, around Jennings, Conkling and Fanning Points, and then into Dering Harbor.

Throwing over mudhook in Dering Harbor, the cruiser will find that he is anchored off both the Shelter Island Yacht Club and one of the many stations of the New York Yacht Club. It is an ideal anchorage, that, throughout the summer, is crowded with handsome craft. Although the cruising squadron of the New York Yacht Club no longer visits Shelter Island, the burgee of the most important yacht club in the world is often seen off its little station. Not only are New York boats seen at Shelter Island, but almost every other organization that cruises on Long Island Sound spends at least one day in Dering Harbor. Many of the clubs disband here, as it is just about a long enough cruise from the average rendezvous at the west end of the Sound to this picturesque summer resort.

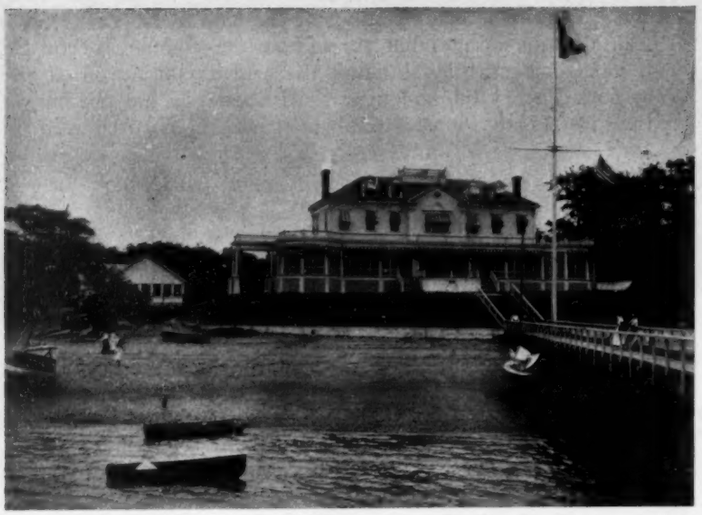
All the clubs that put into Dering Harbor are well entertained by either the Shelter Island Yacht Club or the two big hotels that are situated on the bluffs that overlook the anchorage; and there is plenty of fun at Shelter Island, no matter when one casts anchor at the picturesque summer resort. Enrolled in the fleet of the Shelter Island Yacht Club are many well-known steam, power and sail craft. The organization also has an excellent fleet of little fellows, and these craft are raced throughout the summer. The club also finds time to take a short cruise each summer and visits some of the neighboring organizations. Last year the club gave a series of races for catboats, and this type of craft again is to be the feature of the Shelter Island racing this season.

Weighing anchor at Shelter Island, one must still continue eastward, sailing through Gardiner's Bay, until he reaches Orient Point, the extreme northeasterly end of Long Island. Between Orient Point and Plum Island lies Plum Gut. Once through this turbulent stretch of water, the Corinthian will find himself on Long Island Sound.

From Orient Point the cruise, in any type or size of craft, is a pleasure. For miles and miles towards the westward the Sound stretches in an unbroken sheet of blue. It is a long sail from Shelter Island to the next important Long Island yacht club. As a rule, yachtsmen cross the Sound and spend a day at New London or the other towns on the Connecticut shore. Keeping to the southern side of the Sound, however, the first important harbor is at Port Jefferson, where are located many well-known shipbuilding firms. Continuing westward, the little craft will find several yacht clubs of importance in the waters that open off Huntington Bay. This beautiful strip of water, with Northport Bay on the one and Huntington Harbor on the other side, practically lies land-locked between Eaton's and Lloyd's Necks.

Three yacht clubs and a motor boat club have their homes on this beautiful bit of water. The yachting organizations are the Huntington Yacht Club, the Northport Yacht Club and the Independent Yacht and Boat Club. The summer station and official

HUNTINGTON YACHT CLUB AT THE ENTRANCE TO HUNTINGTON HARBOR.



MANHASSET BAY Y. C. ON THE SHORES OF THE BEAUTIFUL BAY OF THAT NAME.

racing course of the Motor Boat Club of America also is on Huntington Bay. The motor boat club is the organization that has made Huntington Harbor famous among yacht and motor-boat men the world over. Two summers ago the Motor Boat Club of America held its international races for the celebrated Harmsworth trophy off the Chateau Des Beaux Arts, Huntington Bay. It will be remembered that in this race Dixie II successfully defended the trophy against Wolseley-Siddeley and Daimler II, the two fastest motor boats of England, over a course pronounced ideal by racing motor-boat men.

Although the Motor Boat Club of America has no club-house on Huntington Bay, the three other organizations have all permanent homes on the shores of this beautiful harbor. The Independent organization is building a new club-house a little to the south of its present home, and expects to have it ready for the coming season. The new house will be a handsome two-story building of brick with marble sills and blue stone trimmings. It will cost more than $12,000, and will be one of the handsomest club-houses on Long Island Sound.

The Huntington Yacht Club, which has its home on the shores of Huntington Bay, is well known among yachtsmen for the interest that it takes in the racing of motor boats. Each season the Huntington Yacht Club gives a motor boat regatta that brings out an exceptionally classy field of power craft. The organization is noted for its courtesy to visiting yachtsmen, and all who cast anchor off the Huntington Yacht Club are sure of being well entertained.

The Northport Yacht Club is also noted for its hospitality. The club was organized in 1898 and incorporated the following year. Although not very prominent in the racing game, the organization has many well-known cruising boats, and each year takes a short cruise, either alone or in company with one of the other clubs of the Sound.

Lloyd's Neck separates Huntington Bay from Cold Spring and Oyster Bay harbors, where is situated the most famous of all the yacht clubs on the north shore of Long Island. The Seawanhaka-Corinthian Yacht Club, known the world over as one of the most important yachting organizations in the United States, has its handsome home on Center Island at the mouth of Oyster Bay. The harbor is not an easy one to enter, but once around Cold Spring Harbor Light, the cruising Corinthian will see the Seawanhaka club-house, picturesquely situated on a hill of emerald green. The waters of Oyster Bay are deep enough for the largest yachts, however, and it is no uncommon sight to see the palatial steamers and the handsome sloops and schooners of millionaire yachtsmen anchored off the club-house.

The Seawanhaka-Corinthian Club was organized in 1871, but not incorporated until 1887. Since its organization it has taken an important part in the yachting world. Its spring and fall regattas always draw the most famous boats of the country, and its annual cruise is second in importance only to that of the New York Yacht Club. It also is the donor of the Seawanhaka International Challenge Cup for small yachts, a trophy that has furnished the best of international racing since it was given originally in 1895. While the Seawanhaka Club is an organization popular with wealthy yachtsmen, it has an excellent fleet of little fellows that are raced each week throughout the season with great success.

Still sailing westward, and within a short voyage of Oyster Bay, will be found the picturesque harbor of Hempstead. Here is situated Station No. 10 of the New York Yacht Club, the Sea Cliff Yacht Club and the Hempstead Harbor Yacht Club. Probably no other harbor on the north shore is so popular with yachtsmen as this deep bay. From off Station No. 10, Glen Cove, the New York Yacht Club is accustomed to sail all of its most important regattas, with the exception of the ones decided during the annual cruise. The Hempstead Harbor Yacht Club is a popular organization, as is also the Sea Cliff Club.

Hempstead Harbor was the home last summer of one of the best one-design classes on Long Island Sound. The boats were owned by the summer residents of the Glen Cove district, and were known as the "Jewel" S class. The owners of the craft were members of the New York and other yachting organizations, and kept the boats off the anchorage of the big Manhattan club. The class—17-footers under the universal rule of measurement—was raced with great success throughout the summer over the Long Island Sound racing circuit.

The Hempstead Harbor and the Sea Cliff yachtsmen take but little interest in the big regattas on Long Island Sound. Both organizations hold races, however, and have a cruise each summer. The clubs are made up of enthusiastic yachtsmen, and the cruising man will find at either organization a royal welcome. In fact, from the moment the mud hook is dropped until it is weighed again a visitor at either club will have no cause to complain of the hospitality.

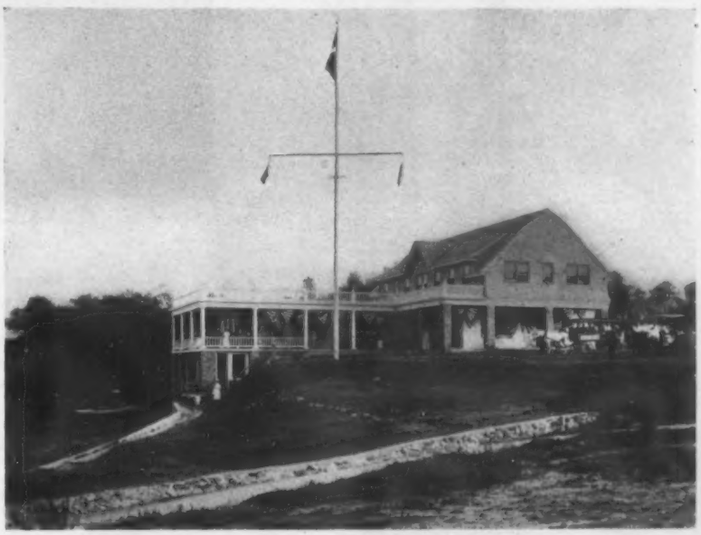
In Hempstead Harbor, also, is the measured mile of the New York Yacht Club. Over this strip of water many famous yachts are timed each year to find out their correct speed. Dixie II, the fastest motor boat in America, made its world's records over the measured mile in Hempstead Harbor two years ago.

HEMPSTEAD HARBOR YACHT CLUB AT HISTORIC GLEN COVE.

Long Island Sound begins to narrow once Hempstead Harbor is left astern. Still sailing to the westward, past Execution Rocks and Sand's Point Light, one enters Manhasset Bay. Here is situated a well-known yacht club and a country club with a progressive yachting department. The Manhasset Bay Yacht Club has been in existence for many years. It was formerly the Douglaston Yacht Club of Bayside; but believing that Little Neck Bay was not suitable for yachting, the organization moved its headquarters to Manhasset Bay and changed the name of the club. Since then it has progressed in a most wonderful manner, and is now numbered among the most prominent yacht clubs in the country.

The Manhasset Bay Yacht Club is a great believer in small-boat racing. Several classes of little fellows are to be found in the club and the members get the best of sport racing these boats, either in the open regattas on the Sound or in the closed races of the club. The Port Washington Club, the other organization on Manhasset Bay, also has a one-design class, and although it is not as prominent as those of the Manhasset Bay Club, the boats furnish good sport throughout the season.

Although the sailors of the Manhasset Bay Yacht Club may have found that Little Neck Bay did not suit their purpose, there is to be found on this body of water, which lies a little to the westward of Manhasset Bay, a most progressive yacht club. Organized after the Douglaston Yacht Club moved to Manhasset Bay, the Bayside Yacht Club was said to be doomed to failure before its birth. However, the unexpected again happened, and the Bayside Yacht Club has been a most flourishing organization since it was founded in 1902.



THE BAYSIDE Y. C. HAS BUILT UP A LARGE FLEET OF POWER AND SAIL-BOATS ON LITTLE NECK BAY.

The club is a splendid monument to the industry of progressive yachtsmen. Although its club-house was destroyed by an incendiary's torch in March of 1908, by Decoration Day of the same year the organization had built a handsomer club-house on the site of its former home. The Bayside Club has grown wonderfully during the past few years, and now has a membership of more than 300 enthusiastic sailors and a fleet of 110 boats. Among the yachts are steamers, sloops, yawls, schooners, cats and power boats. The organization is a great believer in closed racing, and each Saturday throughout the season it holds a club regatta.

With the visit to the Bayside Yacht Club the cruise around Long Island practically ends. There is, however, one other club that must be visited before the yachtsman can feel that he has seen all of the big organizations. It is the Knickerbocker Yacht Club, organized in 1874 and incorporated in 1881, with stations at both College Point and Port Washington. This club is made up of many well-known Corinthians prominent in small-boat racing on Long Island Sound.

Of course, there are other clubs still to be seen by sailing through the East River and ending the cruise at the point from which it was started. There is the Williamsburg Yacht Club, an exceedingly old but still a small organization, that would extend a royal welcome at its club-house on North Beach, Flushing Bay. No other organization of prominence, however, will be found on the Long Island shore until the Corinthian has sailed through the East River and has entered New York Bay.

The Erie Basin Yacht Club, at the foot of Columbia Street, Brooklyn, is the most important of these clubs. It is the most progressive member of the Yacht Racing Association of New York Bay. The Erie Basin Yacht Club is made up of good racing men, and each season it gives several interesting events. The Excelsior Yacht Club, at the foot of Sixtieth Street, Bay Ridge, is the last club to be seen, and once its anchorage is left astern, Owl's Head, the country home of the Crescent Athletic Club, will come into view, and the Corinthian will then know that he has sailed completely around Long Island. Probably no island of its size can boast of as many yacht clubs.

The Month in Yachting

AN old-time yachtsman, talking with me about the Puritan article in last month's YACHTING, referred to the New York Yacht Club's old inside course as one of the unfairest for opponents that was ever laid.

"If the British ever became impressed with the idea that the America's Cup, apart from the merits of defenders and challengers, was here to stay, it was in those old days when the cup racers used to tear up the waters off Robbin's Reef Light near the Kill von Kull, and then, passing through the Narrows, skim over the comparative shallows of the lower bay. It was a poor American skipper who did not know all about the Staten Island winds and currents, whereas his British rival had to feel his way blindly, so to speak. We used to watch races, lying upon the grassy heights of Fort Wadsworth, Staten Island, and we saw more than one race won not altogether upon their merits, but because the Americans knew where to direct their boats to the best advantage."

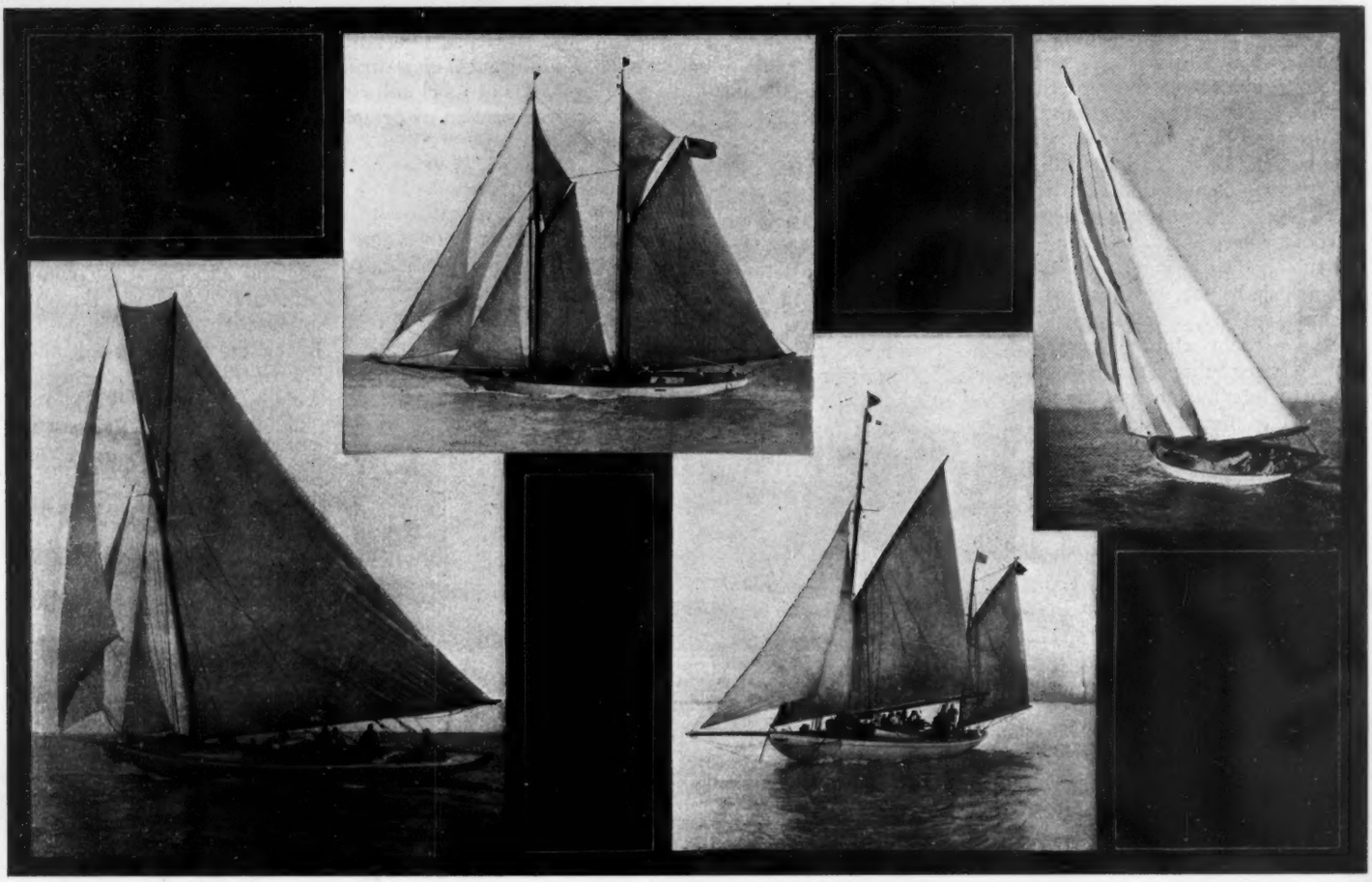
You could not have gotten such an admission from an American yachtsman twenty years ago—which does not indicate unfairness, but merely that perspectives broaden as years go by and that points of view are more accurately taken. Even the New York Yacht Club, which for years after the inside course was abandoned for America's Cup events held its annual regattas there, has deserted the upper and lower bays for the Sound. Every now and then some member tries to start an agitation for a resumption of races on New York Bay, but there "is nothing doing."

You motor boatmen who, in the glad summer time, enter the Albany Basin en route for the waters farther north, should have seen that basin early in March, when the old Hudson drank more tributary waters than it could hold and overflowed its banks. The basin became merely a part of the river, with no dividing line at all. The bridge which crossed it from a point a block below Stanwix Hall, beloved of power-boat sailors, was com-

pletely engulfed, and motor boats whose owners had "rushed the season" reposed high and dry on streets usually given over to wheeled traffic. Other yachts were only prevented from making an attempt to climb State Street hill by chain moorings. It was, all in all, a damp and wet and sordid sight.

So Put-in-Bay gets the big Interlake Yachting Association meet next July! Detroit wanted it, and to back their claims yachtsmen of that city spoke of the big carnival which is to be held there. But Interlake yachtsmen had been up against that sort of thing before, and they had no idea of again appearing as a side-show for any city. Besides, the Put-in-Bay people backed their bid with real money and good, strong talk. As Cleveland and Buffalo representatives at this annual spring meeting, held in Detroit, supported the claims of Put-in-Bay—these cities being further away from the proposed meeting place than any yachting centers in the association—no other delegates made any serious objection. One reconstructive bit of yachting statesmanship was put through. The delegates voted that hereafter there should be two racing bodies—sail and power. Both bodies will have vested in them full power to arrange events each for their own branch of the sport. This recognition of the interests of power boat members of the association will strengthen the body considerably, and will result, next July, in the best week of racing that has yet been held on Lake Erie.

While on the subject of the West it is to be noted that Chicago yachtsmen are still discussing the advisability of changing the destination of the Mackinac race. So far as I can see, if a better place at which to end the long thresh could be found, why, take it. But certainly the mere fact that the summer residents of Mackinac do not "take as much interest in the event as they used to" ought not to weigh heavily. What if they do not? Certainly the New York Yacht Club does not select ports for its annual cruise with any reference to the views of those who happen to reside therein. Stopping places in the port-to-port jaunt are selected for strategic reasons concerned alone with the sport. If Menominee or Harbor Springs or Cheneau Island would add anything to the sport of the contest which Mackinac fails to fulfill, why, then, leave Mackinac. But no other reasons should weigh. Another point which should not be forgotten: Mackinac is pretty well involved in the annals of Lake Michigan yachting now, has taken its place in tradition, and tradition should not be lightly cast aside. The Middle West needs tradition; the element of tradition is essential to the sport everywhere, somehow. The Mackinac Race is now known throughout the country—why lose the name without some good reason? This may be sentiment, but sentiment is not always without weight. Look at the grand races that have been held at the place in the past and the array of fine boats that have won prizes in that event: in 1904, Fred A. Price's sloop Vencedor; in 1905, Dwight Lawrence's schooner Mistral; in 1906, George R. Steers' yawl Vanadis; in 1907, the sloop Vencedor, owned then by George Tramel; and in 1908 and 1909, William Hale Thompson's fine schooner Valmore. There are many things to tell about all those races, and unless it is really important, why not continue to pile year upon year into the Mackinac records?



VENCEDOR. MISTRAL. VANADIS. VALMORE.

THE WINNERS OF THE MACKINAC RACES.

Agitation in favor of governmental supervision of power boats

is again cropping out in Congress. In one way that is a good sign, in so far as it is indicative of the increasing importance of the sport. And yet it should be seen to that any legislation that comes does not go too far. Naturally, reason suggests that motorboat men be not allowed to conduct their craft in a happy-go-lucky way, and that they should be ignorant not only of the elements of navigation, but of the ordinary rules of safety afloat. That is to say, owners of gasolene craft should certainly be amenable to some general law, but this is by no means inferring that power craft should be burdened with all the apparatus for life-saving that a steam yacht or merchant vessel carries. Nor should owners be held down to the endless requirements of a master or engineer of a vessel engaged in the business of carrying passengers or freight. Let reasonable legislation be passed, and let it be devised by men familiar with the game, and not by those who know nothing about the capabilities, requirements and capacity of the modern power boat. In point of fact, hundreds of competent gasolene engineers are being turned out year by year, and the sport, as time goes on, is establishing itself upon lines of scientific knowledge.

BASIN OF THE ALBANY YACHT CLUB. A FAVORITE STOPPING PLACE FOR BOATS BOUND TO AND FROM THE LAKES AND CANALS OF THE NORTH.

Everyone will be interested in seeing what success Henry J. Gielow will have with the new speed boat he is designing, or rather has designed, for Frederick K. Burnham, of the Thousand Islands Yacht Club. She is now building at the yards

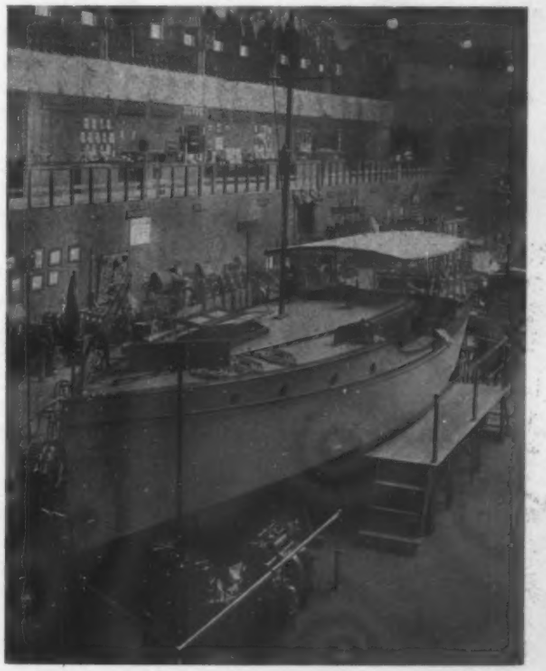
(Continued on page 366.)

Some Impressions of the New York Show

APPARENTLY everyone in New York City, and from the territory adjacent thereto within a radius of many miles, who owned a boat, or had any hopes of owning one, was at Madison Square Garden some time during the week ending February 26. This year's show was a practical one in every sense, and there were no freaks to be seen, either in boats or engines. The entire aggregation of products exhibited seemed to be along the line of utility and reliability.

As most of the exhibits were covered in our February number, we will confine these impressions to the new things seen during the week. Among the novelties in the way of boat construction was the 36-foot cruiser of the Welin, Lane & DeGroot Company, in which bronze plates were substituted for the conventional wooden planking. The boat was of the raised forward deck type, with an after cabin trunk and a steering bridge between the two. A novelty herself, the boat carried an innovation in steering gears. This was a newly patented device, on the hydraulic principle, in which copper tubes carried a solution of glycerine and alcohol from a pump or cylinder at the steersman's station to pistons acting on the tiller.

By means of an ingenious device loss of pressure through leakage was compensated for automatically, and the lack of the usual friction experienced in the ordinary steering gear allowed the quick and easy handling of the rudder under all conditions. Power is supplied by a regular wheel and quadrant gear or by a tiller. Instead of a wheel, this particular boat was equipped with a tiller mounted on the after bulkhead of the forward cabin. The tiller pointed aft, and reminded one very much of the steering gear of some of the earlier models of the smaller type of automobiles.

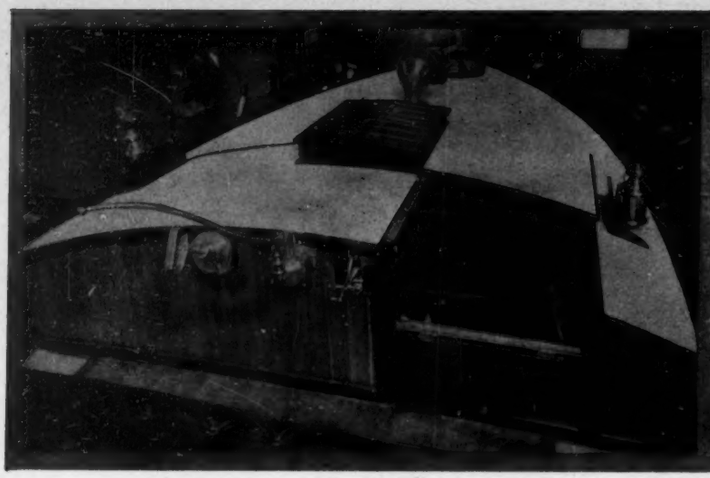


THE NEW ELCO 40-FOOT STOCK MODEL RAISED-DECK CRUISER.

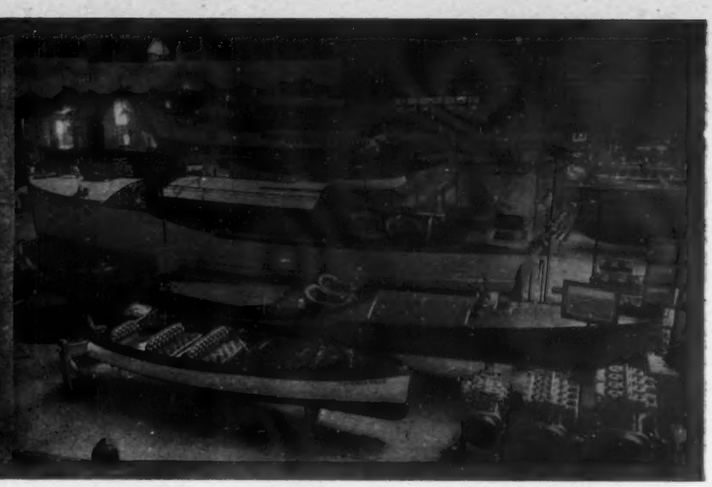
The tendency among the boat-builders was to exhibit more large craft and fewer small ones. A notable exception to this, however, was the case of the Atlantic Company, which showed a complete line of Gurnet dories and their new speed boat, and the Detroit Boat Works, which exhibited a full line of moderate and small-sized metal and wood-planked craft.

The star of the Gas Engine & Power Company's exhibit was their new 42-foot, raised-deck cruiser. As regards interior arrangement she was a great improvement over the boat exhibited by them last season. Instead of subdividing the cabin accommodations into several small compartments, she contained but three—a toilet of ample size at the bow of the boat, a large and very comfortable cabin amidships, and a combination engine room and galley aft.

There was 6 feet of headroom in the main cabin and ample sleeping space on the extension transoms to accommodate four people and yet leave a wide passageway between them. The engine room was a real room. It allowed space to reach all parts of the engine, and the protecting shield between the engine and the passageway to the main cabin was composed of rubber sheeting on removable stanchions. The whole arrangement could be instantly taken down should it become necessary to tinker with the power plant. On the



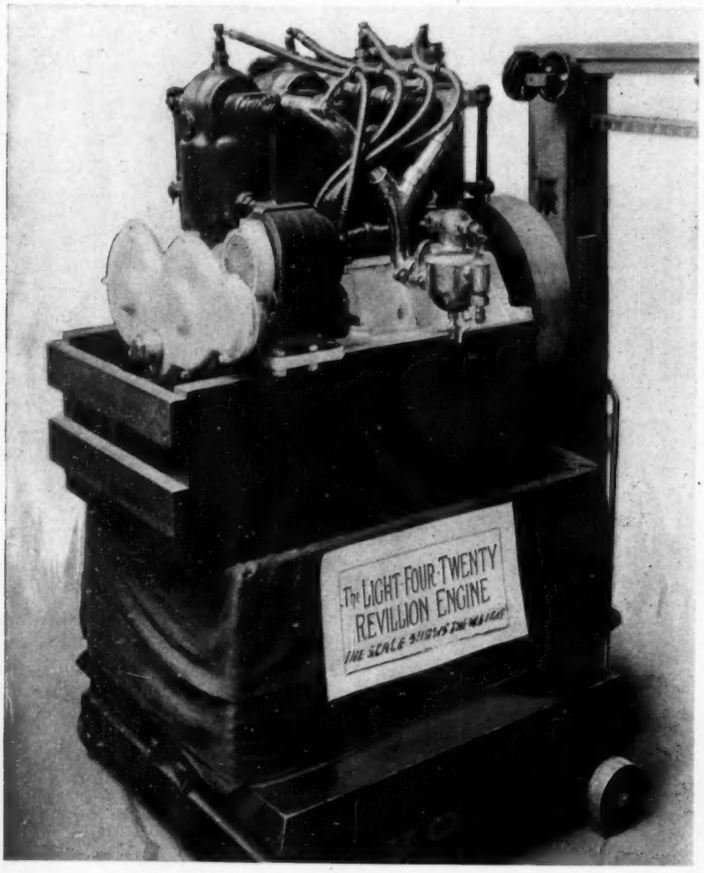
VIEW OF THE ARRANGEMENT OF REVERSE LEVER, STEERING GEAR, AND SPARK AND THROTTLE CONTROLS OF THE WELIN DAVIT AND LANE & DE GROOT BRONZE CRUISER.



THE WELIN DAVIT AND LANE & DE GROOT BRONZE CRUISER, ONE OF THE NOVELTIES OF THE SHOW IN BOAT CONSTRUCTION.

starboard side of the engine room was a berth for a guest, or paid hand, should such be carried on the boat. On the port side was a really practical-sized ice chest.

But two feet less in over-all length than the Gas Engine & Power Company's boat was the new raised-deck cruiser of the Electric Launch Company, of Bayonne, N. J. This boat was 40 feet in length over all, of 9 feet 8 inches beam, and drew 3 feet 9 inches of water. The power plant was a 16-20 H. P. Standard motor, giving her a speed of 10 miles an hour. This boat was of the raised-deck and extension-trunk type, and was divided into stateroom, main saloon and engine room. The latter compartment also contained the galley and a berth for the engineer. Stateroom and main saloon offered comfortable sleeping and living accommodations for four people.



THE NEW LIGHT-WEIGHT, HIGH-SPEED ENGINE OF THE ATLANTIC COMPANY.

The bow was plumb, with a rounded forefoot, and her broad, slightly-rounded stern enabled her to carry her beam well aft, making a very roomy cockpit. The boat represented a new departure of the Elco Boat Company in the production of stock cruisers.

The engines seen at the show ranged in size from the big, heavy-duty 75-H. P. Wolverine to a tiny 1-cylinder, 1-H. P. "Brownie" canoe motor; and as one interested observer remarked, the manufacturers are coming to a realization of the fact that the best-made engine sometimes goes wrong, and that when it does so, taking it down is a very different proposition when it is installed in a boat than when standing on the assembly bench of a factory.

Accessibility was never better shown than in the average power plant as exhibited this year, for which the manufacturers are to be greatly commended and the boat-owning public of the engine-buying class are to be congratulated.

More and more the engines are falling into distinct types of heavy-duty, low-speed, medium-duty, medium-speed and out-and-out high-speed models, and the man who to-day has designed for him a hull for a specified purpose is in a position to equip that hull with a definite type of motor that will secure for it the very best results in the way of service.

In regard to equipment, the majority of the exhibitors spared no pains nor expense in the way of securing lubricating systems, pumps and ignition equipments. In fact, the relative amount of the value of these accessories and the engine prices showed a most commendable tendency to insure satisfactory working of the motors by supplying them with the best outfits that could be supplied and leave a fair margin of profit on the transaction.

Signaling systems naturally fell into three classes: compressed air, obtained by an air compressor; compressed gas, taken from the engine; and electric outfits, operated by dry or storage batteries. The activity of the inspectors in enforcing the laws regarding the equipment of motor boats during the past couple of seasons has given an impetus to the manufacturers of such apparatus, and as a result the motor-boat owner is to-day in a position to install a system that will fit the requirements of his boat.

When it came to methods for keeping the boat dry, it would seem that every boat-owner who is caught operating a hand bilge pump next season is doing so because he needs exercise. Power-operated bilge pumps, run by either friction from the fly-wheel or attachments on the shaft, were much in evidence. Then there were bailers, automatic in action, and operating very much on the principle of an under-water exhaust, which allow the skipper to have all the water sucked out of the bilge as soon as the boat makes better than six miles an hour.

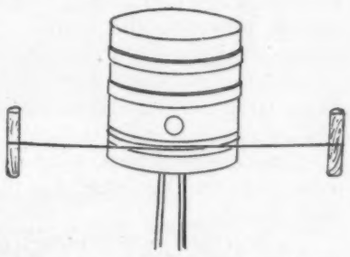
Making the Old Motor as Good as New

REPAIRS WHICH WILL PROBABLY BE FOUND NECESSARY AFTER SEVERAL SEASONS OF OPERATION

By HAROLD WHITING SLAUSON

A MOTOR which has already been run a couple of seasons should still have a long and healthy life before it if each year's overhauling becomes more thorough and each part is renewed as soon as the slightest wear is apparent. Even a new motor should be taken apart at the end of its first season's run and the carbon or soot which is almost certain to have accumulated in the cylinders removed, but actual replacements should not be necessary until after the engine has been in use two or three years. At the end of this time the motor may be as good as new, but it is always wise when overhauling an engine two or three years old to *expect* to find several renewals and adjustments necessary which were not required the first season. If there are none, the owner may be pleasantly surprised.

Probably the part of the motor exhibiting the first signs of wear will be the piston rings, and these should be examined every season, as trouble may be found here after only a few weeks of running. An insufficient supply of oil, or the use of a poor quality of the lubricant, will cause one or more of the rings to stick in its groove. This will result in a broken ring, or a ring which is held so closely in one position in its groove that there will be portions of it not in contact with the cylinder walls; and in either case the effect on the motor will be a loss in compression and expansive force of the ignited charge which will greatly reduce the power and efficiency. A stuck or a broken ring will sometimes be indicated by a loss of power in the motor, but the trouble can only be located *exactly* by removing the piston and examining the rings.

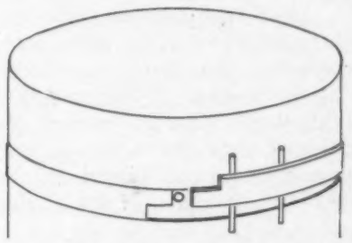


METHOD OF COMPRESSING RINGS TO GET PISTON BACK IN CYLINDER.

It is a comparatively easy matter to remove the piston from a cylinder, and the amateur may do this himself and make an examination of the condition of the rings without the necessity of calling in an expert. If the cylinder has a removable head, the connecting-rod should be unfastened from the crankshaft bearing, and the piston may then be lifted out. Openings, or "hand holes," in the crank case will be found, through which the connecting-rod bearing may be reached. If the cylinder is made with a solid head, the whole casting should be loosened from its base and lifted off, leaving the piston still attached to the crankshaft. This may be removed later, if desired.

With the piston and all rings thus exposed and accessible, a thorough examination may be made. It should be remembered that the rings are springy, and when in position should fit the cylinder walls closely. In order to do this there should be no binding between the sides of the ring and the groove in which it is held. If a ring is found to be stuck, the carbon or gummed oil should be softened by the application of a little kerosene and the ends gradually worked loose with the flat end of a screwdriver. Great care should be taken in thus loosening a stuck ring, for it is easily broken when spread too far. When a ring is loosened it may be removed by spreading one end until a wedge or short piece of wire can be placed between it and the outer surface of the piston, and by thus following the ring around, alternately spreading and wedging, it will finally be sprung far enough apart to be slid out of the groove on to the piston wall. The rings of a small motor may sometimes be removed with the fingers; but the ordinary rings are so stiff that the method described above, or some variation of it, must generally be used.

Although none of the rings may be stuck or broken, it is a good idea to remove them all for the purpose of cleaning the groove. Great care should be taken in returning each to the groove from which it was first removed, for these rings are not interchangeable, each being ground to fit perfectly the place it is to occupy. In one portion of every groove a pin will be found which fits into notches cut into the end of its ring. This is to prevent the ring from gradually slipping or turning around the piston, and it will be noticed that in alternate grooves these pins are placed one above the other, while in successive grooves they are located on diametrically opposite sides of the piston. This "staggering" prevents all the openings or joints in the rings from ever coming one above the other and thus forming a straight line through which the compression and expansive gases could escape. In returning the rings to their grooves it should be made certain that the joints of each fit snugly around their respective pins when the ring is pressed together.

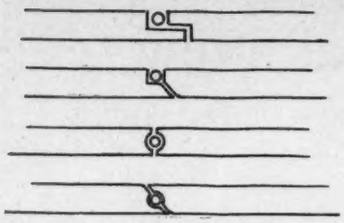


METHOD OF REMOVING RING FROM PISTON HEAD.

Even though none of the rings is stuck or broken, there may be a loss of compression, due to the excessive wear of several seasons of running; and a motor in which some of the rings have not been renewed at the end of three or four years is indeed a wonder. The imperfect fit of the rings will be indicated by the blackened appearance of those portions which do not come in contact with the cylinder walls. This lack of contact forms a small passage through which the hot gases are blown, and the resulting scorched appearance is in striking contrast to the bright, shiny look of the rest of the ring, which has been in continual contact with the cylinder wall. A ring of so perfect a fit that there will be no "blow-back" whatsoever is almost an impossibility, however, and it is only when the scorched portions of successive rings appear one above the other, indicating that the hot gases have passed on through into the crankcase, that there will be an absolute necessity for a renewal of the rings. As a rule, it is only the bottom ring which should be expected to be found bright and shiny, as the upper ones have a much greater pressure to withstand.

The fitting of new rings is a job which should not be undertaken by the amateur, as the time, labor and skill required in the cutting and grinding make this the work of an expert.

The return of the piston to the cylinder will be a slightly more difficult feat than its removal, as the expanded condition of the rings must be reckoned with. In the case of the cylinder with the removable head, in which the piston is set down from the top, the rings may be compressed by means of a simple, home-made instrument, consisting of a length of strong stove-pipe wire with a wooden handle fastened at each end. This wire should be about 8 inches longer than the circumference of the piston, and when looped around a ring with the ends crossed at its joint and the handles pulled in opposite directions to tighten the loop, the



DIFFERENT METHODS OF PLACING PIN FOR HOLDING RINGS IN POSITION.

ring will be compressed sufficiently to allow it to slip down into the cylinder. With some cylinders having a solid head, in which case the whole casting must be slipped down over the piston, this wire and handle arrangement cannot be used. In this event an easy way is to tie a piece of marlin, or heavy, tarred cord, around each ring to hold it close together. As the piston enters the cylinder the cord will be pushed off from each successive ring. Too fine a cord should not be used, as it might become wedged between the piston and the cylinder wall and eventually find its way into the crank-case and connecting-rod bearings.

Next to the piston rings the crankshaft end of the connecting-rod bearing is the most liable to wear after a few years' operation, and even though there may be no perceptible looseness after several seasons it should be examined carefully every time the motor is "taken down." Although in the two-cycle motor the piston is always exerting a downward force when operating under load, a loose connecting-rod bearing will always wear more quickly than will one in which there is no perceptible lost motion. As long as there must be a certain degree of wear between the contact surfaces of the moving parts of a motor, the connecting-rod bearing is made of a soft alloy, such as babbit metal or bronze. Inasmuch as the connecting-rod is much harder than either of these alloys, there is very little wear in it, and it is only the latter which must be renewed. As a rule, however, it is only when the bearing has been allowed to run dry, or when some foreign substance has found its way into it, that there is any necessity for a renewal of the babbit or the bronze. If the bearing is loose, it does not necessarily indicate that it must be renewed, for a little "play" is merely an indication of wear, due to use—a wear which has probably been smooth and even in all directions, and one which may be taken up easily by readjustment of the bearing caps.

Provided he is careful and has the necessary patience, this readjustment may be done by the amateur, for it is, after all, a sample operation. Most bearings of this kind will have thin pieces of sheet tin, copper or fiber separating the adjoining flat portions of the bearing at the points where the two halves are held together. These are sometimes known as "shims," and there should be a sufficient number of them so that when the bearing nuts are tightened all the pressure will be taken on these thin strips and the crankshaft left free to turn in the bearing. It will be seen that an insufficient number of these will cause the bearing to bind on the crankshaft when the nuts are tightened, and that too many will result in a loose bearing in which there is an undue amount of play. After a couple of seasons of operation it is evident that the softer metal of the bearing will have become worn somewhat, and it will be necessary to reduce the number of shims. By using thin shims in the proper combination it will be possible so to set the bearing that, when the nuts are tightened, the connecting-rod will be free to turn easily, and yet there will be no lost motion or play between the parts.

A bearing which has been worn rough, or has been "chewed," must be renewed, either by fitting new bronze or brass bushings or by removing the old and pouring in new babbit metal, according to the nature of the bearing. In either case, these are operations requiring the services of a good machinist, and it is not advisable that the amateur should tackle a job of this kind by himself.

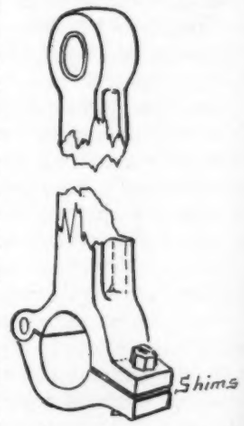
The elusive knock which will often be heard in a motor after it has been run a few months may be due to any one of several causes; but if it still continues after the spark has been retarded, nine times out of ten the trouble will be found to lie in a loose crankshaft or connecting-rod bearing. Occasionally the fly-wheel will work itself loose on the end of the crankshaft, and this will set up a knock in the motor, which, although easily remedied when once found, will probably be difficult to locate unless the operator is experienced in such matters.

A slight click heard in the cylinder when the motor is running with no load will generally indicate a loose wrist-pin bearing. This is not a serious trouble, and a two-cycle motor may be operated for several months in this condition if the play does not become too great. The wrist-pin is the short steel rod on which the upper end of the connecting-rod works. This wrist-pin crosses the interior of the hollow piston and is driven into the opposite walls and held in position by a pin or key. In some motors the wrist-pin is fastened rigidly in the opening in the upper end of the connecting-rod, and the bearing is then located in the opposite walls of the piston through which the wrist-pin passes. Whether the bearing is located in the connecting-rod or in the piston, however, it is probable that the motor will be so designed that the wear will be taken by bronze bushings, which form the surface on which the wrist-pin turns. In rare instances it may be necessary to renew these; but inasmuch as the connecting-rod turns through only a small angle on this bearing, almost any method by which the play can be taken up will serve the purpose. If the wear has been sufficient, an extra bushing made of thin sheet brass may sometimes be used.

When the wrist-pin bearing is located in the upper end of the connecting-rod, as is generally the case, some machinists employ an exceedingly simple method for taking up the wear. This consists in removing the connecting-rod and striking a few blows on an iron plate laid over the end of the bearing. This tends to "upset" the bushing slightly and reduces the size of the opening. Some wrist-pin bearings are constructed with a split in one side, and the two halves are clamped together by means of a cap screw. If shims are used here, wear may be taken up in much the same manner as that described for the crankshaft bearing of the connecting-rod.

The bearings in which the crankshaft revolves may require attention at the end of two or three years of use, and if the wear may be taken up by the removal of a shim or two, the owner will probably be able to attend to this himself. It must be remembered, however, that bearings, mechanically considered, are the most important part of a two-cycle motor, and that, rather than run any risk of poor setting or adjustment on the part of the amateur, it is advisable to call in the services of an expert machinist. New bearings, in particular, should never be installed except by a professional, for the scraping and delicate fitting necessary call for a knowledge and experience far beyond that possessed by the average man who is "mechanically inclined."

The gaskets in the cylinder head and crank-case may be examined each season when the motor is taken apart, and it is probable that the first mentioned will have to be renewed. The others, however, including those around the exhaust and intake manifolds, may last for several years. The ones requiring the most attention are those forming the watertight joint between the cooling system and the interior of the cylinder, and great care should be taken in the renewal of these.



CONNECTING-ROD BEARINGS, SHOWING SHIMS.

Even the man who has had but one season's experience with a marine motor will realize that all parts of the ignition system should be examined carefully at least once a year. Plugs, wiring and coils may last for an indefinite number of sea-

sons, or one or all may give out after only a short period of use. Wornout spark plugs and defective wiring may be renewed by the owner, but a burned-out coil should be returned immediately to the factory and a new one used in its place until the first has been repaired or pronounced worthless.

Although it is an interesting experience for a man to make his own repairs and replacements on his motor, it is liable to become an expensive one unless he tries no more than he *knows* he is capable of doing, for many an engine has been absolutely ruined because an inexperienced owner has desired to become an expert.

An Autumn Trip to Lloyd's Harbor

By L. deB. HANDLEY

Photographs by the Author

LLOYD'S HARBOR, tucked away in a sheltered corner of Huntington Bay on Long Island Sound, awakens a host of memories for the man who has been there in the fall of the year. Memories of perfect days, sparkling with sunshine; of water wonderfully blue; of beaches shimmering with silver; of woods glorious in the brilliance of autumn foliage; of air crisp with the touch of early frost. Memories, too, of steady breezes that kept the boat on its beam the livelong day; of exciting contests for prizes which all shared; of hunting and fishing excursions in which the quarry was an immaterial excuse; of youthful pranks that brought back the irresponsibility of college days. Memories to dwell fondly upon when storm and blizzard rage outside and the logs crackle cheerfully in the grate.

THE LIGHT AT LLOYD'S HARBOR.

Have you ever, fellow sailor, felt that insistent call of the sea that on bright fall mornings rings all about and makes you long for a sight of the briny? If you have, then go to Lloyd's the first chance you get, even at the risk of falling in with that unregenerate tribe of pirates that infest the spot—the Lloyd's Harbor Club. And fall in with them you undoubtedly will, for some of them are always there. But, after all, if you are sound of body, possessed of sufficient sense of humor to appreciate a joke at your own expense, and blessed with enough wit to get even, you will find it very pleasant to mingle with the nomads who fly the pennant of the coursing hound. Time will never lie heavy on your hands while in their company, and if you are offered in holocaust to the gods of mirth, take it philosophically, laugh with them—and then retaliate.

The skipper rang up my number on the telephone one memorable November morning, and reminded me that the double holiday preceding Election Day afforded a good opportunity for a visit to Lloyd's.

"Ducks are reported plentiful," he added, "and we can find plenty to do if they are not. Several boats will be at Lloyd's from Saturday to Tuesday, starting home in time to give skippers and crews a chance at the polls, so we'll have company there and back. Are you on?"

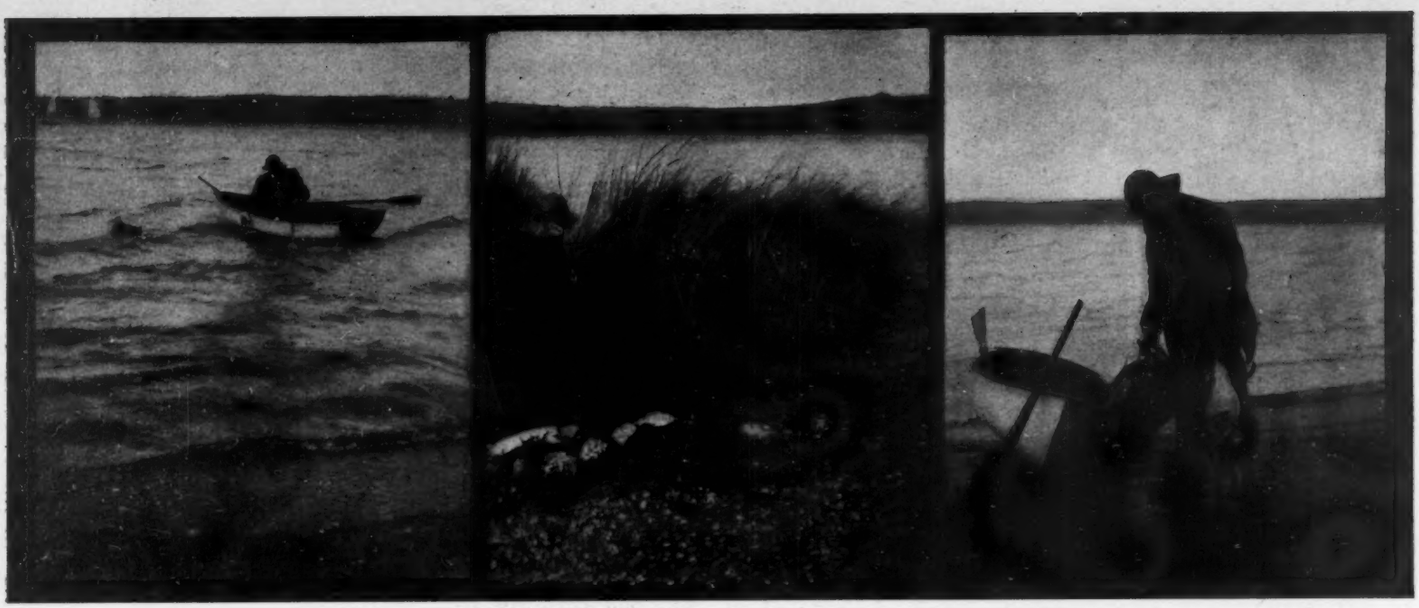
I was indeed. In fact, I'd been looking forward all week to the bid. And so it came to pass that we met the next day at the station, loaded down like a couple of express wagons with guns, ammunition, food and the hundred and one things necessary on such a trip. Three hours later the paraphernalia had been carefully stowed inside Scimiter's stout timbers and we cast off from the moorings. Our boat was a 30-foot-waterline sloop, lean, sharp and built for racing, with a rig of 1,200 feet of canvas.

A spanking breeze from the east bowled us over as soon as we struck the open, giving promise of an all-afternoon thrash to windward. After everything had been trimmed flat we found we could not even make Matinicock Point, so we decided to take a rap full, run into Hempstead Harbor as far as we could, and then hug the Long Island shore and take advantage of the smooth water and favoring tide.

The sailing was glorious. Heeled over hard, with lee deck awash and canvas tugging until the rigging rang like the chords of a high-strung instrument, the good old sloop was footing merrily. She seemed not to feel at all the nasty swell through which she sped, her sharp bow cutting the waves like a knife and throwing high clouds of spray that the head wind blew back on us in drenching showers.

Under the shelter of the Red Spring Mills we came upon our first ducks, in large flocks. The coots predominated, but we noticed many other varieties, including old squaws, teal, black,

THE CREWS FROM SOME OF THE BOATS LANDED ON THE BEACH AND BEAT THE WOODS FOR GAME.



SETTING THE DECOYS. THE SEDGE GRASS MADE A GOOD BLIND. GOING BACK ABOARD FOR BREAKFAST.

ruddy, mallard and whistlers. The fun began soon after. With one sitting forward ready to shoot and the other at the tiller, we took to stalking, and by alternating at the gun we both enjoyed the combined pleasures of sailing and shooting. For an exciting and tantalizing sport commend me to duck shooting from a sailboat. About the only way to get within range of a flock is to beat up to windward and then run down on them with free sheets, which often means turning far out of one's course. To go to that trouble and then have the birds fly off just as one feels sure of a shot, is irritating, to say the least. Shooting ducks from a blind is child's play compared to it.

The ducks around Red Springs were a wary and knowing lot, and we had very little success with them. One small bunch looked promising, however, so we kept on chasing them, and eventually, after flushing them many times, got near enough for a load of No. 4 shot to bring down the rearmost. It was only wounded, though, and a wounded coot is about as easy to get as a healthy hell diver. For hours we followed it, hoping for a chance to finish it; but every time, just as we prepared to fire, the cunning bird would go under, swim away, and come up where we least expected him to, always out of harm's way. In despair, the skipper finally risked what looked like an impossible shot, and a lucky pellet found the head, killing instantly.

But our troubles were not over. The bird must be retrieved. As a rule, one carries a scalping net, and the task is an easy one; but we had none, and to pick up by hand a floating object from a boat having as much freeboard as the Scimiter is a decidedly hard job in a breeze. Either we came up at a 7-mile clip and couldn't possibly snatch the bird, or went half-speed and the wash of the boat bounced it out of reach. Or, if we approached with flapping sails the deck was so high above water as to make even touching it out of the question. It took us some little time to get it on board. After that we beat up the beach in short legs as far as Oak Neck. Then, thinking we could do better by taking one long tack until Huntington Bay could be layed, we started across.

RETRIEVING.

It was late afternoon before we struck the bell buoy off Lloyd's Neck. The wind had been gradually moderating and it now barely filled the sails. A long, easy roll had succeeded the choppy swell, and the air had turned soft and balmy. It made tame sailing, but it improved the shooting. Ducks are more easily approached in quiet, warm weather than on gray or squally days. We got difficult shots at a few coots without much success, and then, off Target Rock, ran into a fine drake mallard that we brought down, making the first kill really worth while of the trip.

The flukey breath that was stirring hadn't the weight to carry us against the outgoing tide and we anchored a few yards from the beach, within a quarter of a mile of the lighthouse. We could hear sounds from the fleet of yachts lying across the narrow spit of sand, but it was a case of "so near and yet so far."

Darkness fell fast and with it a dense fog crept over the water. Standing, as we did, right in the path of boats going into Huntington or Lloyd's, our position was not the most desirable, and knowing that a couple of the yachts had power tenders, we blew loudly triple blasts of the horn, hoping that they would understand the signal. But although we repeated the call several times, no answer came, and we decided to go below to cook dinner.

A recalcitrant stove was using up the skipper's temper and profanity at an alarming rate, when the welcome "put-put" of a toy motor in action reached us through the open port, and we tore on deck to hail the craft. We might as well have saved our breath. While we could hear distinctly every word that the occupants uttered — and they were discussing our identity

PICKING UP A DUCK FROM THE DECK.

and whereabouts — our own voices were completely drowned to them by the chugging of their engine. Though they hunted high and low and we kept up a continuous and infernal racket, it was to no purpose. Someone on board the dinghy then proposed to let us go to a warmer climate, and we had given up all hope when the skipper had a sudden inspiration and dived into the cabin, reappearing a second later bearing our dazzling pyro lamp, and we were seen immediately. A cry from the launch acquainted us with the fact, and in a few minutes the Fraidcat drew alongside with a dying sputter and the commodore leaped on board. The firewater ritual was then observed with due ceremony, and the motor being set in motion again, we felt our way carefully through the white pall, eventually rounding the lighthouse and finding a cosy berth astern of half-a-dozen faintly discernible and bobbing ghosts.

THE CREW OF RAMALLAH GOT A GOOD BAG.

Once at anchor, we invited our rescuers to stay to dinner, but after a careful inspection of our larder they suddenly remembered a pressing engagement aboard the Ramallah and went. Our long fast and the lash of the keen salt air made it unnecessary for us to seek the delicacies they knew awaited them there. We tackled our plain fare with wolfish appetites and enjoyed it thoroughly. Thereafter, having washed up and built our bunks, we were smoking nightcap pipes preparatory to retiring when a padded nose bumped into Scimiter's side, shuffling steps echoed on deck, and the cheerfully grunted request of a drink preceded Captain Rube down the companion. He took in at a glance our preparations for sleep, and his grunts became expressive of contempt and indignation.

"So this is the way you two understand etiquette," he muttered. "Nice, sociable people, blowing into a harbor without even inquiring if their friends are dead or alive! Bed, is it? Not if I know it. There are two skippers here that need taming; and, then, someone must be held up for lubricants, the Centipede's locker having run out. With your kind assistance, I'll undertake both jobs at once. So on with the oilskins and out we go!"

We obeyed meekly. When the Cap is on the rampage you want to trail along. It means doings. So we listened to his evil plans, clinked glasses to their success, and stole out into the lifting fog. We stopped for a moment on Ramallah to secure accomplices and then proceeded toward the victims.

The night was so still that it was necessary to work silently. With muffled oars we glided along and were glad to find lights out on both boats; everyone slept. With infinite caution we drew up the anchors of both craft, brought them together, twisted the cables around the flukes, tied them together, dropped them again into the water, then rowed back to Ramallah and awaited results.

As expected, there was sufficient breeze to drag the fouled hooks, and the boats soon drifted up on the mud, whereupon half a dozen megaphones directed at them began to bellow warnings and the night was made hideous with cries. The patter of bare feet on hollow decks came to us a second later, then voices still thick with sleep called to each other in anxious query. The splash of cables being drawn in reached our ears, more excited talk, and then over the little bay broke such a storm of words that made even the gaping clams close their shells in horror.

We who stood listening — shocked and grieved — wondered at the unseemly display of irritability on so slight a provocation. After all, two power dinghies were ready to go to the rescue the minute a signal was given, so there was absolutely no danger; and if they didn't know about it, there was certainly no reason to blame us for it. It must be confessed, though, that if they talked loud, they showed that they could act as well. One skipper hoisted his jib in less time than it takes to tell it and worked his way out to a safe spot, while the other manned the dinghy himself and lustily towed out to his previous anchorage. There followed dire threats for anyone who should attempt to start anything else, and then the mantle of silence dropped softly again on the sleeping harbor.

Some time later we emerged from the cabin of Ramallah, the ringleader having an oblong box tucked under one arm and a cylindrical package under the other, and, wishing the crowd "pleasant dreams," we departed.

Aboard the Centipede we stopped long enough to unravel the decoys which were to be used on the morrow, strung them out astern ready for use, and went back to the Scimiter.

It was still dark when we crawled on deck for ablutions the next morning, but dawn was making. As we went forward for the bucket we noticed a dinghy with two occupants leave an unknown yawl and creep stealthily toward the Centipede. At first we could not make out why they crouched so low in the boat, but presently we saw the man in the bow lift a gun to his shoulder and it broke on us in a flash that the hunters must be greenhorns about to make an attempt on the life of Centipede's decoys. Two shots in rapid succession awakened the sleeping echoes; we heard the lead whip hard on the stern of the yacht, and then came hasty retribution, for the dinghy upset and the hunters were floundering in the water. When the captain of the Centipede sprang on deck, ready for murder, he took in the situation at a glance, and his natural sense of humor getting the best of his wrath, he let out a howl of delight, and back he went to the cabin.

On going ashore a little later, we decided to separate the decoys in three small bunches, about fifty yards apart, and each take station beside his own. It worked well, but the weather was too quiet for good shooting. The birds passed high and mostly out of range. Still, we bagged a few, and even had we not, the sight of the sunrise would have amply repaid us for the loss of sleep.

It was wonderful, that prismatic awakening of the world, with the light gradually firing the beautiful reds and browns of the wooded shores into a flaming mass; the opalescent water reflecting the changing tints of horizon and sky; the long spit of white sand shining like a strip of silver; the lighthouse a dark silhouette against the glowing east; and over it all the sapphire loveliness of a cloudless heaven.

When we counted the bag we found that the joint kill amounted

(Continued on page 364.)

AN AFFAIR OF OIL

OLD WHALERS LAID UP AT NEW BEDFORD. BARK COMMODORE MORRIS ON THE LEFT AND BERTHA ON THE RIGHT, BEING REPAIRED.

By JAMES COOPER WHEELER

Author of "There She Blows"

SCIENTIFIC modern whaling, viewed by the old blubber-hunting sea dogs who survive in Nantucket and New Bedford, doubtless awakens amazement at the progress of the age; but these old-timers must look askance on methods which eliminate all that made whale hunting the most fascinating as well as the most venturesome of pursuits to the bold and hardy men engaged in it in by-gone times.

Think of the present-day specially constructed steamers, equipped with every appliance that science can devise; of cannon-firing harpoons; of whales dragged by steam power and logging chains up the slippery, slanting wharf to be cut in!

Shade of Long Tom Coffin! Fire a cannon at a whale, and from a steamer at that! A true whaleman would hardly have turned his bomb gun loose in direst extremity. He preferred the steel and a hand-to-hand fight. A 19-foot whaleboat, with oak ribs the size of your thumb, and cedar skin the thickness of a cigar box, was good enough for them, and in such craft they would lower after leviathans when the ship was staggering under close-reefed topsails. And not once, but many times, in the rampant Western ocean have they been swept out of sight of the ship, and still pursued their prey until harpoon and lance had done their deadly work. Then in the biting blast and raging sea they moored to leeward of the carcass in the oily "slick" until the ship beat up to them.

WHALING BARK CANTON HOMEWARD BOUND.

Indeed, the killing of a sperm whale, even in the calms of the Southern seas, was a matter to impress itself on the mind. Six men made up the boat's crew. The harpooner oar in the bow was pulled by the boat-steerer, whose task it was to make fast to the whale. The harpoon or "iron" had a barbed head on a wrought-iron shank about 30 inches long, ending in a socket. A pole, from 4 to 6 feet in length, fitted the socket. The whale line was attached above the mousing. Each boat carried in the fore sheets two irons and two lances. The lances were sharp as oil stone could keep them, and the shank was longer than that of the harpoon, for the mission of the lance was to kill, while the "iron" needed only to go through the blubber and toggle on the inner side. The lance was lighter, too, and having a thin line attached (for withdrawals), was thrown incredible distances with accuracy by a method called "pitch-poling." The butt of the lance was placed in the palm of the right hand and the pole grasped about 4 feet up with the left, the point being almost perpendicular. Then with a strong, quick heave, the lance made a great parabola, descending on the whale, cutting through the blubber as if it were cheese deep into the red flesh beneath. If skillfully aimed, such a dart often brought a red spout, the precursor of death.

The mast — for whaleboats were equipped with sail—was stepped in a hole in the middle of the bow thwart. When not in use, it and the sail were rolled in a compact bundle, the butt end shoved under the after thwart and allowed to project over the stern. Between the 'midship and tub thwarts was a large tub containing 1,400 feet of manila whale line, each rope yarn of which had been tested to sustain a weight of 30 pounds. Another shot and a half (675 feet) was coiled in an oblong tub between the tub and after thwarts. In all, each whaleboat carried nearly a third of a mile of line. Not unfrequently a large whale, when it felt the prick of the "iron," would start for the bottom and take it all out, and perhaps that of another boat to which it had been bent on, into the bargain. The whale lines were "mellowed" before being put into the tubs—that is, limbered and the kinks taken out. Then they were carefully laid down in a flat or flemish coil. A whaleboat is an awkward place for a tangle. If a flake were to leap out of a tub and slip over a man's body—say the after oarsman—when the whale is running, it would have been "all day with him."

On lowering, the officer's station was in the sternsheets, and he worked the steering oar when the boat was being pulled up (or the tiller, if sailed) on the whale. This oar was a huge sweep projecting 17 feet behind the boat. It gave complete con-

WHALE ALONGSIDE WITH HEAD CUT OFF. THE STRIPS OF BLUBBER ARE NEXT CUT FROM THE CARCASS.

LOWER JAW, OR CASE, ON DECK. SEVERAL HUNDRED GALLONS OF OIL ARE OFTEN EXTRACTED FROM THIS PIECE.

trol of the craft. On the starboard side of the stern sheets a loggershead, or snubbing post, also played an important part in the capture of a leviathan. It was of heart of oak, like the crew, and about 3 inches in diameter.

Go back with me for a while on board an old whaler in the South Pacific. A vertical sun is pouring down, and the atmosphere quivers with heat. Pitch oozes between the deck planks, and the tar on the shrouds sticks to your hands. The illimitable Southern ocean pulses with a slow heave that never breaks the glassy surface of the waves. Sails hang listless on the yards. The head of the ship "boxes the compass." The watch, kept busy, for that is healthful shipboard rule, fairly pant at their tasks. Suddenly from the main royal cross-trees comes the cry:

"Thar she blows! Thar blows! Thar blows! Thar she goes flukes!"

Languor changes into intense action. The men, half clad, swarm from below, and buzz excitedly with those on deck who have abandoned their perfunctory labor, and stand expectant. The captain, as from a catapult, shoots out of the companionway and hails the masthead:

"Wher'eway's them spouts?"

"From a school of sperm whales on the starboard bow—'bout five miles distant." The boats are lowered without more ado. The sturdy oarsmen create a "white ash" breeze, despite the dead calm, and finally come up to the school. The "old man" heads his boat for the largest, a sixty-barrel cow.

"Stand up, Charley!" to his boat-steerer.

"Aye, aye, sir!" as he puts his knee in the clumsy cleat, and the battle gleam flashes from his blue eyes.

"Pull all! Pull hard!" says the captain to the crew. They bend their sturdy backs, and there is a sudden springy impact, as though the boat had struck a floating cotton bale. The captain's sinewy figure grows rigid, and his voice is tense as he calls:

"Dart!"

Charley's body sways lightly, and his arms rise in a fierce gesture, The first "iron" is driven into the black bulk of the whale with the force of a mighty engine. Then, swift as wildfire, he grasps the second from its crotch and buries it—chock to the hitches—alongside the first. "All fast, sir," he says calmly, as if he had simply belayed the mainbrace.

"Starn, all!" shouts the captain.

The men push on their oars. The great body twitches and shudders, then suddenly "mills" (turns), and the giant flukes—20 feet from corner to corner—sweep up through the water, splintering a ton or two of brine into diamond spray, and fall on the spot the boat has vacated. A second convulsion, and the head of the monster sinks, while the flukes wave a black signal of distress 30 feet high. As they disappear beneath the wave the line runs smoothly from the tub'back around the snubbing post, where the "old man" guides it, and out between the oarsmen, through the chocks in the nose of the whaleboat. The wounded whale is sounding at the rate of 20 miles an hour, but the boat is fast. The line whizzes like an endless serpent; the "old man" throws a deft round turn about the loggerhead and bears down to increase the drag. Then the oak post groans as it is bitten by the rope smoking through the chocks. Charley looks to see that the boat hatchet is clear to cut away, for the slightest hitch would tear the boat to flinders. But all is safe, and in a few moments the line slackens.

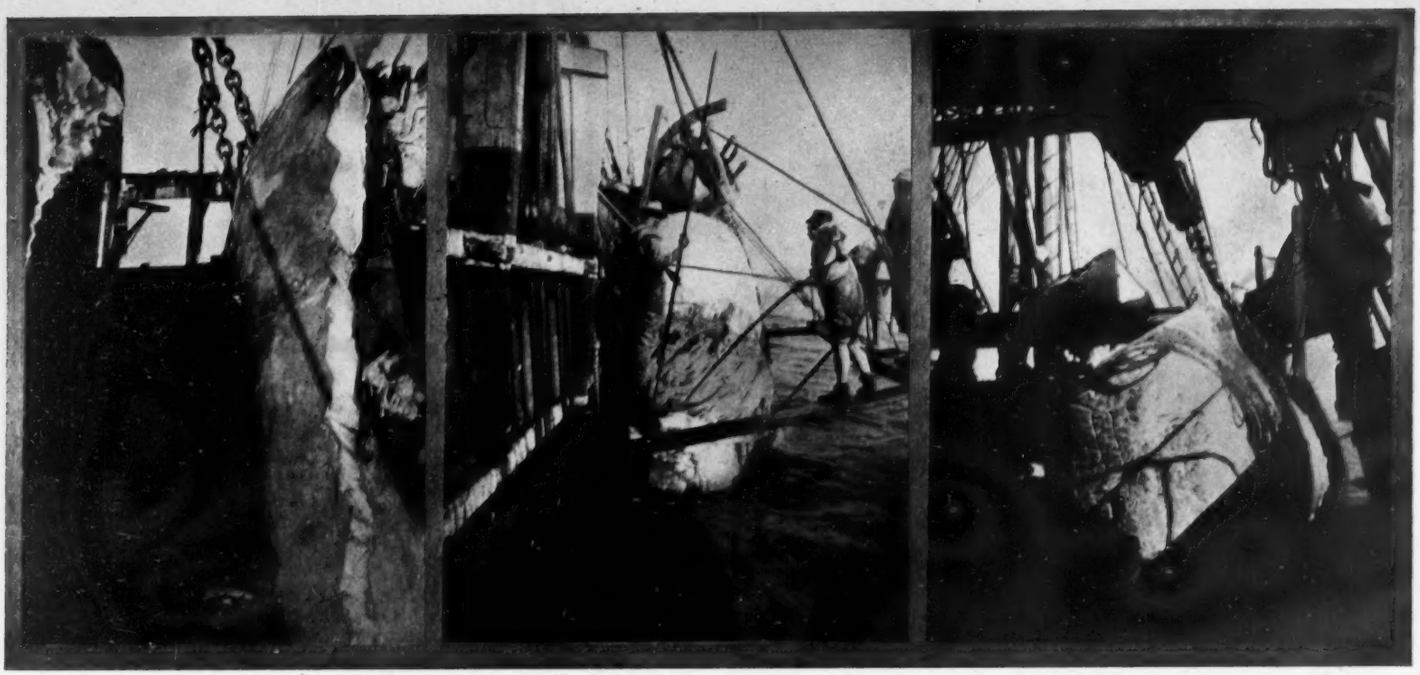
"Come aft, here, Charley! Face for'ard, you men!"

The boat-steerer takes the steering oar, and the captain goes to the bow. The crew—except the after oarsman—reverse on their seats and begin to haul in line as the whale comes to the surface. The after oarsman coils it in wide loops in the stern sheets at Charley's feet, overlaying each loop so that it will run out smoothly in case of emergency.

A minute more and 50 feet in front the water grows black in the sun and then creams over the gigantic head of the mammoth rising into air. The "old man" has his lance in hand, and pitchpoles it so that the keen point enters just forward of the shoulder blade and sinks clear of bone to the wooden shaft. As he pulls back on his lance warp and sees the spout rise crimson, he exclaims with startling energy:

"Starn, all! Starn, for your lives!"

Never more willingly did those oarsmen work, and the trim whaleboat glides back, swift and noiseless as birchen canoe. None too soon, for with a convulsive heave the mighty animal goes into her flurry. Fancy, if you can, the grandest scene in the eternal struggle between brute and human! Fifteen tons of bone and muscle and flesh animated with diabolical strength and fury, in dumb protest against fate. That vast carcass, quivering with energy, springs into action. It beats the water into cataracts with its tail. It churns the waves into foam with its tremendous head and shoulders. Finally, with resistless momentum, it hurls its bulk around in a circle of 50 feet across, making a swell that tosses the whaleboat—now in safety at a distance—like an eggshell on its seething crest. Once—twice—thrice! It completes the round, throwing clear life-blood from its spout hole, and then loses way. A spasmodic heave passes through the mountain of flesh, and the great mammal turns belly



BLANKET PIECE BEING STRIPPED FROM WHALE.

CUTTING IN FROM STAGING SWUNG OVER THE SIDE OF THE SHIP.

THE CASE, OR LOWER JAW, BEING SWUNG INBOARD BY A TACKLE.

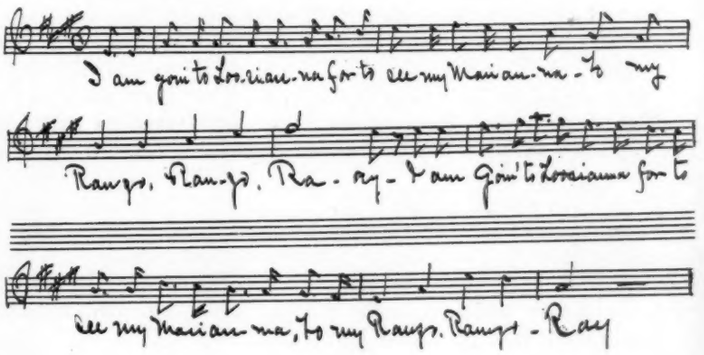
up—a pitiable monument testifying to the supremacy of Man.

Then the other boats (there are four, and no one has made a capture) hitch themselves tandemwise to the carcass, and pull away for the ship. Hard work, but they come alongside at last. Then the fluke chain is passed about the whale's "small" (just above the spread of the flukes) and taken forward through the hawse hole to be made fast to the windlass bits in the bow. The crew climb aboard, hoist their boats, and get something to eat before "cutting in."

The whale staging is next rigged, while the cutting tackles are broken out from 'tween decks. This staging consists of two planks about 8 feet long shoved outboard from the waist over the whale, which lies alongside with its tail under the starboard cat heads. The planks are 10 feet apart and joined at the outer ends by another, which is bolted to them at the intersecting points. The whole arrangement is so braced and guyed as to support the weight of the officers at work. Protected by a waist-high life line, they stand on the staging, and with their whaling spades (handle 10 feet long and cutting edge 4 inches wide) first cut off and then split the huge head of the cachalot lengthwise, so that it can be hoisted inboard. This is no easy matter, for the neck is probably 15 feet through, and the staging shifts with each heave of the sea, while the carcass is constantly changing position. But the mate is strong of arm, and his hand has the deftness of long training. He finds the joint with his spade, separates it, and instead of a whale's head it has become "junk" and "case." The junk, or upper part, is a mass of integumental tissue enveloping the comparatively insignificant skull, and so filled with spermaceti that it may be squeezed out by the hand as water from a sponge. It is hoisted on deck, and by the united strength of the crew shoved out of the way under the after house until there is time to attend to it.

Now the case, or lower jaw, is secured by tackles, and hoisted on end. Here comes what looks like a yarn for the marines. From a cavity within its interior 200 to 600 gallons of pure spermaceti oil is baled. The jaw bone and teeth (whale ivory) are preserved for "scrim-shawing," the process by which the old shellback converts them into *objets de virtu*.

Taking the blubber jacket off the body of the sea mammal is next in order. The mate marks out a strip of blubber 10 feet wide from the edge where the head came off and running around the carcass. He loosens the end of this strip from the red flesh with his spade and in this end chops a small hole in the blubber. The tackles (made fast to the main masthead) are overhauled. Then a boat-steerer—the one who harpooned the whale—goes down with a bowline around his body on to the slippery carcass, now surrounded by sharks, and hooks the tackle in the hole. The fall is carried forward to the old-fashioned windlass. The crew are already stationed at the brakes, and the chanty-man pipes up:


I am goin' to Lou-sian-na for to see my Mari-an-na - o my
Rangs, Rang-gs, Ra - ay - I am goin' to Louisiana for to
see my Mari-an-na, To my Rangs, Rangs - Ray

The men take up the brisk, rhythmic tune; the brakes are pumped with fervor; the fall tightens, and the strip begins to rise, the whale revolving and the mates spading like mad. Up comes the great strip of blubber to the masthead, and—

"Two blocks, sir!" call the boat-steerers.

The tackle blocks have come together, and it can be hoisted no further. The second tackle—there are two used in cutting in—is overhauled to the waist. Here the boat-steerer with his boarding knife, a double-edged blade as long as a cutlass, makes a new hole at the height of the rail, and the second tackle is hooked on and heaved taut. Then he severs the strip straight across and sings out: "Heave and surge!"

The second strip goes mounting to the masthead and the first one surges to the deck—a Brobdignagian blanket 10 feet wide, 14 feet long and a foot or so thick. Sailors, detailed for the purpurpose, spring on this with short-handled spades, and cut it into

(Continued on page 364.)

The Maritime Hospitals

HOW DAMAGED AND BATTERED SHIPS ARE REPAIRED—THE ADVENT OF THE STEEL SHIP HAS CAUSED MANY CHANGES AND IMPROVEMENTS IN DOCKING FACILITIES SINCE THE DAYS OF WOODEN VESSELS

By STUART STEVENS SCOTT

OF all the works of man there is nothing so nearly human as the ship. The chief engineer, who is a pigmy alongside of the giant engines with their 30,000 or more horsepower, gazes upon the whirling mass of polished steel with the pride of a father. He sees life in their every movement and affectionately strokes the huge pistons with oily waste, while he watches carefully his engine-room squad to see that they do not neglect to keep the oil cups filled and every nut properly adjusted.

HOW FIRE AFFECTS STEEL CONSTRUCTION. BRIDGE OF S. S. MAIN.

The captain of the ship, on the bridge 40 feet above the water, also has a corresponding regard for his vessel. With him, however, it is the fabric as a whole that receives his consideration and the component parts are not thought of save in the case of a breakdown, and even then there is a tendency to blame the ship herself for her bad behavior.

This love of the boat is fully as strong in the case of smaller craft. What true yachtsman, whether his vessel be a 16-foot motor boat or a 90-foot sloop or schooner, does not feel a thrill of admiration and love for the craft that bears him? There is a bond of sympathy between the ship and the man that handles it that is beyond the comprehension of those who do not love the sea and they cannot appreciate the fact that every craft, be it large or small, possesses individuality, if not intelligence.

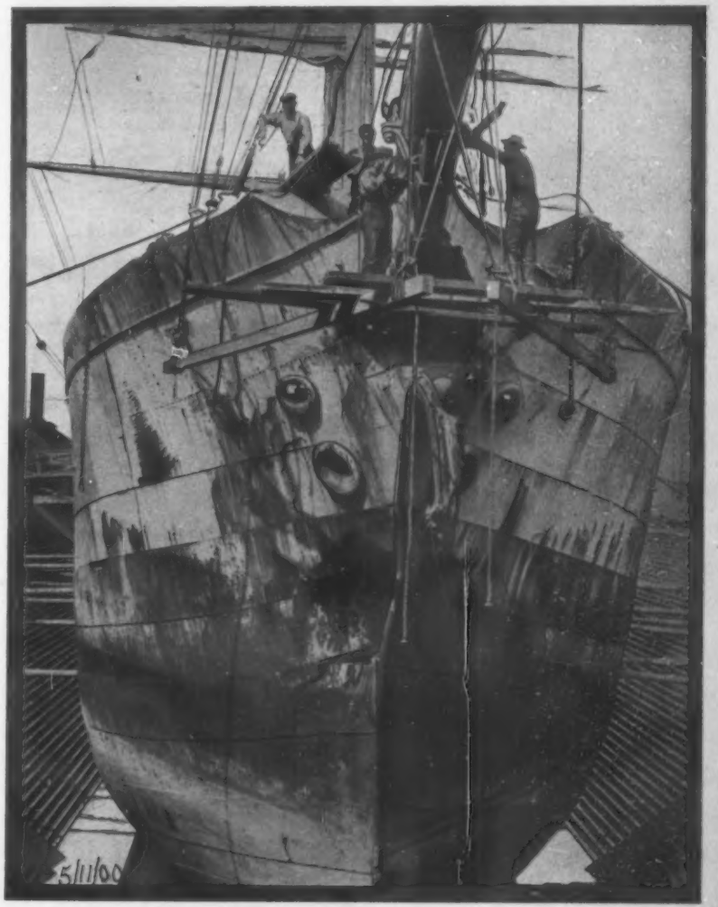
With the advance in the art of ship building, when the great liners that ply like ferry boats across the seas are in construction somewhat akin to the skyscrapers of the larger cities, there has of necessity been a corresponding advance in the equipment of dry docks and repair plants of the shipyards—those marine hospitals for damaged ships. To-day such an institution as the one at Newport News, which is the largest in this country, can not only build an ocean greyhound, but has in its repair department every facility for repairing it, no matter how great the damage may be.

Following our simile, the most important feature of these maritime hospitals is the "operating table," which, in this case, is the dry dock, and when the ship is properly adjusted the "operation" begins. Scalpels are pneumatically driven and it does not require much time to cut out the injured parts. Meanwhile steam hammer and forge are busy making new plates if the "patient" be a steel craft, or else band saws and planers are set to work if the ship is of wood.

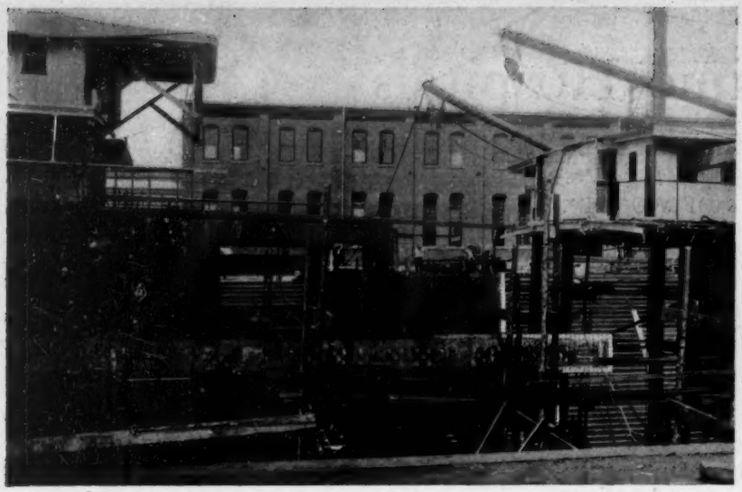
The ship yard at Newport News has done some really wonderful maritime surgery. A noted instance of this was the rebuilding of the North German Lloyd steamship Main, which was partially destroyed in the great Hoboken fire a few years ago. This ship received such damage that she had to be sunk to save anything. The wreckers gave her first aid by raising her and she was then towed to the Hampton Roads, where she was placed in dry dock. That she was in bad shape may be judged by the accompanying photographs. But she was worth rebuilding; and though the job was the most extensive of its kind ever undertaken in this country, and cost more than $600,000, it was successfully accomplished and to-day the Main is afloat and in service just as though she had never been through such an experience.

Another interesting repair job was that on the British steamship Sommerhill, which was badly damaged by going ashore. She was on a charter and but fifty-one working days were allowed for making the necessary repairs. By working night and day the vessel was repaired and sent from the yard in just fifteen days. She loaded a cargo for Europe and reached her home port in time. Not only that, but on her way across she picked up and towed into port a derelict that netted her sufficient salvage to more than pay for the repairs made on this side of the ocean.

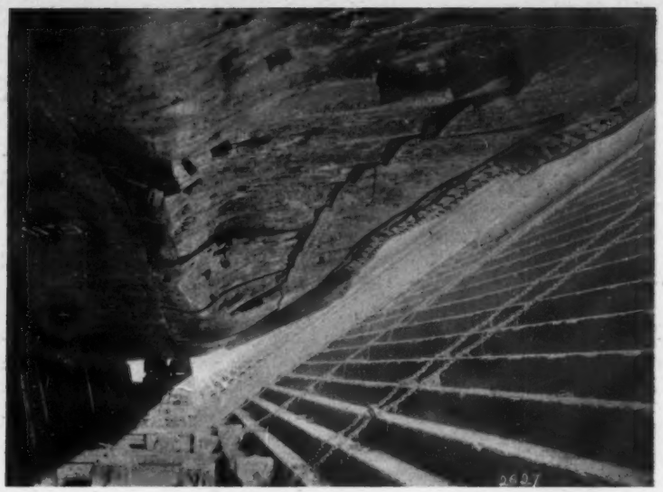
While repair work is interesting, there is another branch of the repairers' work that is even more so, and that is in the cutting in two and lengthening of steel ships. One of our large coastwise steamship companies has, within the past few years, had two of



RESULTS OF A HEAD-ON COLLISION. REPAIRING BOW OF SAILING SHIP.



LENGTHENING A STEAMSHIP. THE VESSEL HAS JUST BEEN CUT AND THE ENDS PULLED APART PREPARATORY TO ADDING NEW FRAMES.

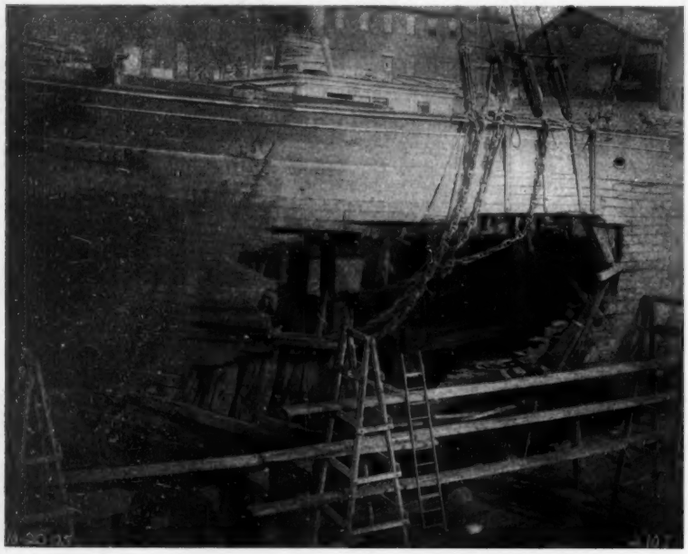


WHAT ROCKS WILL DO TO THE BOTTOM OF A STEEL SHIP. LOOKING UP FROM THE BOTTOM OF GRAVING DOCK.

their ships thus treated, with the result that they not only have increased cargo spaces, but they are better in many ways.

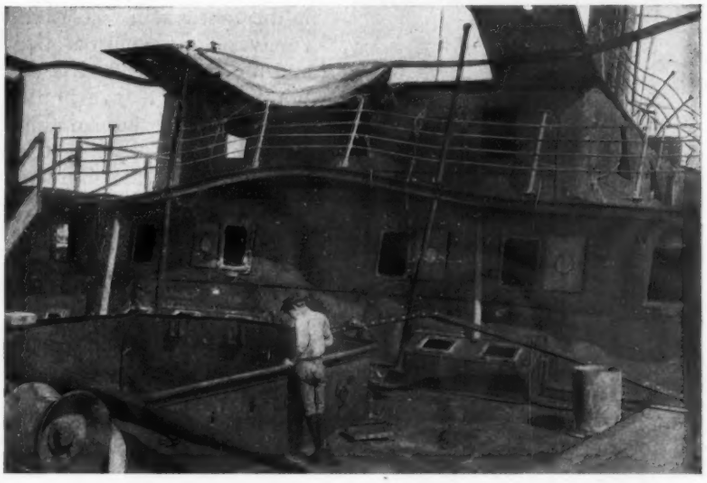
What may be considered as a comparison to the field hospital of the army is the floating dry dock, which has reached the highest development in the Dewey, built for the United States Government and now at Cavite, Philippine Islands. This dock, which is 500 feet long and 100 feet wide between its walls, is capable of lifting a battleship of 14,000 tons. It is also independent of land resources, for not only has it been equipped with machinery of every sort, but it has forges, steam hammers, pneumatic drills, etc., while there are fine living quar rs for its officers and crew, with everything that is found on a modern passenger ship, refrigerating apparatus, bath rooms, electric lights and many other features, to say nothing of a wireless telegraph outfit. More than that, the dock is in three sections, so that two-thirds of it will dock the other portion, thus making her self-sustaining.

The prototype of the floating dock dates back to 1693, when Peter the Great, Czar of Russia, had one constructed by using an old ship; but for centuries before the advent of the steel ship the master mariner was his own physician. When he sailed away he carried not only a goodly supply of extra spars and lumber, but the members of his crew were all accustomed to the use of edged tools.



WOOD CONSTRUCTION, WHERE THE FRAMES ARE BADLY BROKEN, MAKES A DIFFICULT JOB.

When the bottom of his vessel became foul with barnacles the skipper sailed into some sheltered harbor and careened or beached her at high tide. Beaching under proper conditions was no more dangerous than drydocking, but as work could be carried on only between tides it was tedious. Careening, therefore, was the most



THE EFFECT OF FIRE ON THE STEEL STEAMSHIP MAIN.

popular. This method, however, lost much of its popularity when the Royal George capsized while careened, drowning not only many of her crew, but scores of men and women who were visiting the ship at the time.

Since vessels were built on the land and launched on ways it was but logical that, for repairs, the use of ways, with the operation reversed, should be adopted; and thus came about the marine railway. This method has been improved from time to time, roller bearings have taken the place of grease, engines have replaced the hand winch and the horsepowered apparatus, and there are thousands of them in use, some of them capable of hauling out vessels 300 feet long and of 5,000 and 6,000 tons burden.

With the advent of the steel ship of such great length, weight and rigidity as to make hauling out a risky proposition the graving dock was built. This is nothing but a huge excavation into the land at the water's edge, narrow at the bottom and sloping out at the top, the sides being a series of stone tiers which serve the purpose of steps and rests for the shoring timbers.

The vessel is floated into the dock and firmly braced in position. The dock gate, made of steel and fitted with compartments,

860-FOOT GRAVING DOCK AT NEWPORT NEWS, THE LARGEST IN THIS COUNTRY.

board. He is the compass adjuster, and not until he completes his work is the ship ready to take up her fight for existence upon the sea.

Another matter connected with the repairing of ships that is of vital importance is the method of getting damaged vessels to dry docks where the repairs can be effected. This is a job usually undertaken by wreckers, and several large wrecking companies are in existence who make a specialty of this work.

Where a ship goes on the beach, or sinks in water where it is possible to raise her, it is purely a wrecking job to float her and patch her up so that she may be towed to the nearest dockyard; and when this happens at a distance from any port with docking facilities, as on stretches of our Southern and Gulf coasts, it will be seen that the wrecking vessels must be well equipped and manned by men who know their business. But that is a story in itself and may well be treated in a separate article.

is floated into position at the end of the dock, where, after being drawn close up to the wall, it is filled with water and allowed to sink into grooves. Giant pumps throwing millions of gallons of water an hour soon clear the dock, while the pressure of the water on the outside of the gate shoves that portion so tight to the walls that not a particle comes in. Within a few hours the floor of the dock is as dry as that of a drawing room, while the vessel, perched high on keel blocks, is ready for inspection and work.

In years gone by the average physician for human ills was a man of general practice. So it was with the ship carpenter. In days of oak and hemp the carpenter built outright, even to the painting, but nowadays there are specialists for the ship as well as for the human being. There are blacksmiths, foundrymen, coppersmiths, plumbers, drillers, riveters, boilermakers, shipjoiners, cabinetmakers, decorators, upholsterers and many others, each one of whom represents a separate guild; but in the monster modern passenger ships one is as necessary as the other for the completion of the whole.

When the last mechanic has left the vessel and she is in the stream ready to depart, there is another specialist who steps on

HAULING BOW FORWARD AFTER CUTTING SHIP IN TWO FOR LENGTHENING.

The Building of a Boat

By JOSEPH ELIOT HILL

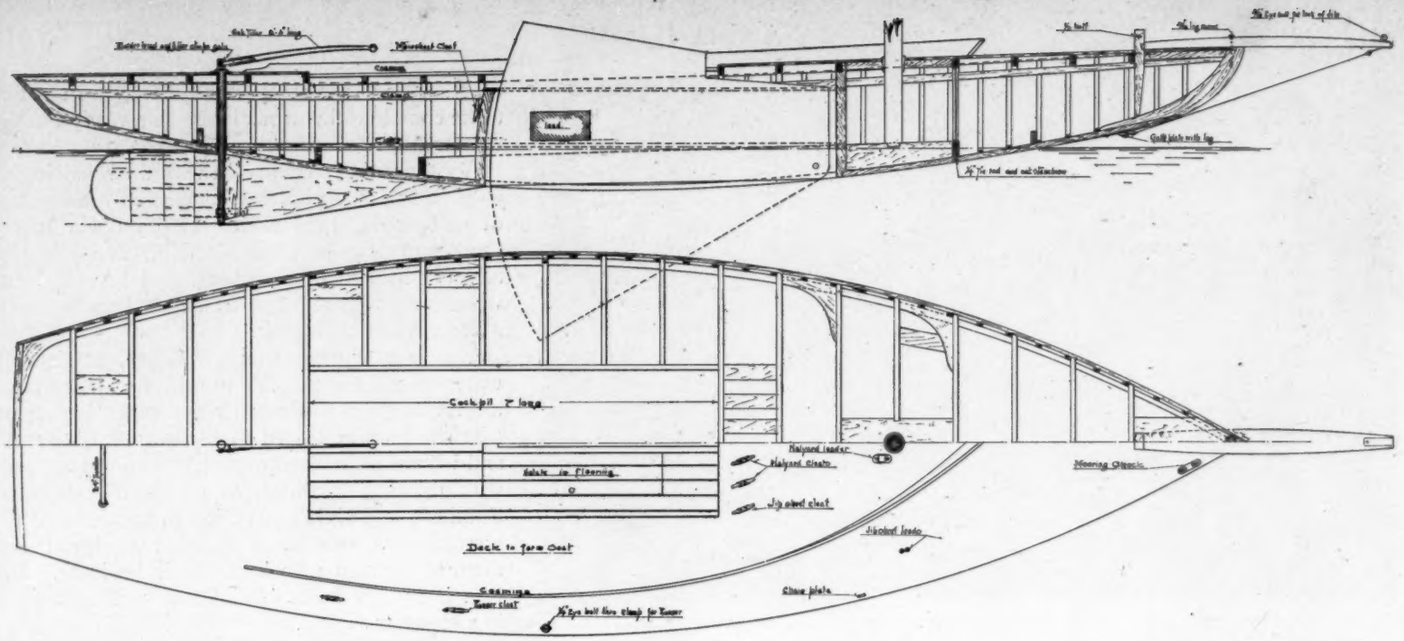
Plans by Charles D. Mower

PART II.

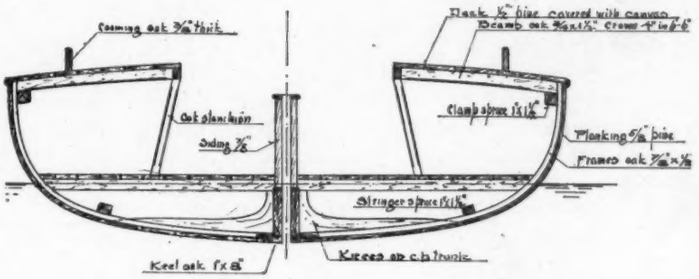
AFTER the planking was done, and well looked over to see if any fastenings had been missed, the floors, or braces of oak across the boat, were fitted and put in, and three knees of hackmatack on each side of the centerboard logs. Holes should be bored in all of these to let the water through, and all strongly fastened with brass screws from the outside. Next, some stray pieces of wood were nailed across the boat to prevent springing out of shape, and the moulds were taken out. This left more space to work in, and the bilge stringers of hard pine, 1 inch by 1½ inches, after being tapered off at the ends, were put in the whole length of the boat. Then the clamps along the top of the frames, of 1½-inch hard pine, were put on, after allowing a 1½-inch drop below the sheerline for the deck beams.

After the clamps were well fastened with screws, the inside of the boat was given two coats of lead-colored paint, thoroughly brushed into the wood. The floor beams of spruce and the flooring of ⅝-inch cedar were then put in, not forgetting the small hatches, to get to the bottom of the boat for sponging out.

The centerboard trunk, or sides, were made of ⅞-inch pine, two pieces to a side, screwed on with brass screws and plugged. The two pieces were doweled with ¼-inch galvanized rod to keep them from springing, and the joints on the centerboard logs were made with tongue and groove (see Fig. 1). This makes an effective joint and keeps the water out. The post aft was



CONSTRUCTION PLAN.

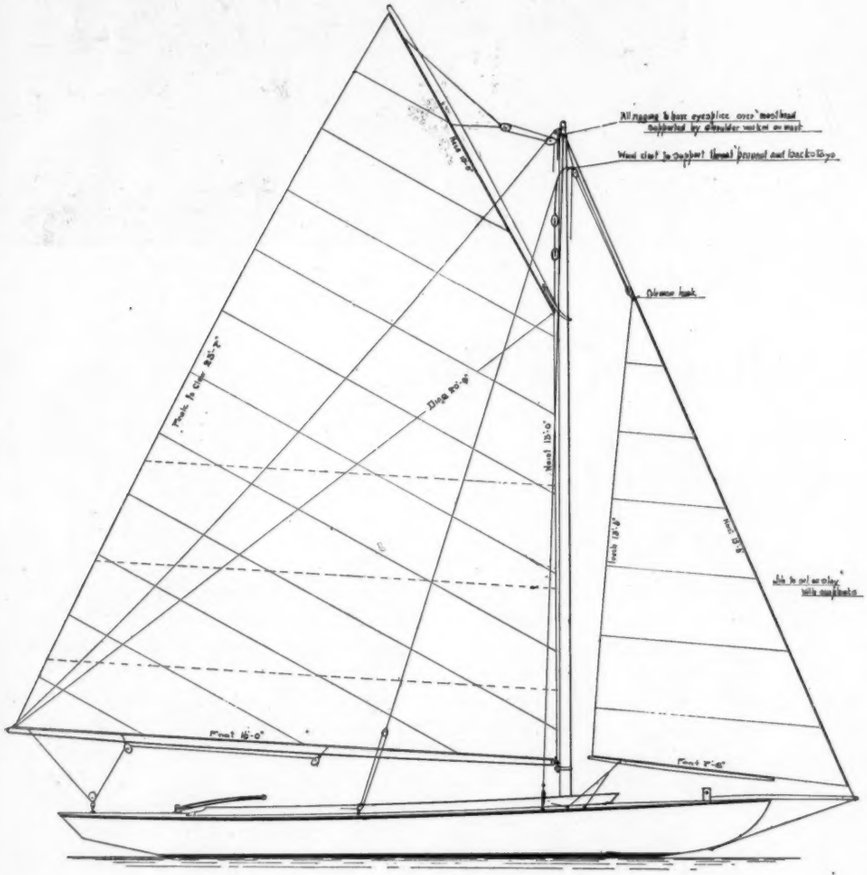


then sawed off and the top finish of mahogany put on with round-head screws and finished with half-round edges to make a neat job. The post forward was left to fit into a deck beam for strength and to give support to it.

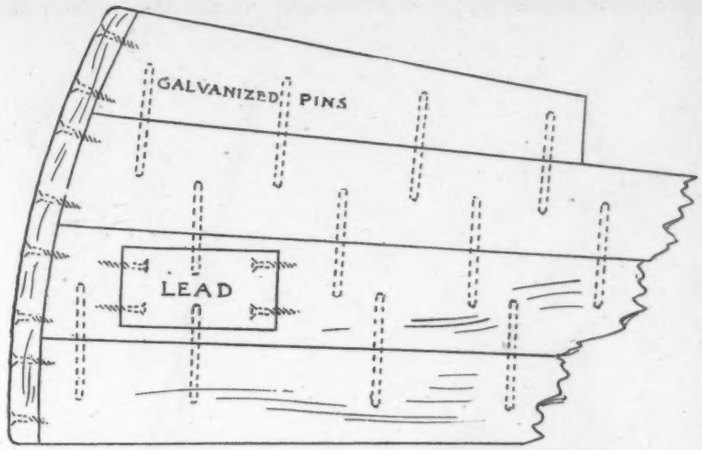
The deck beams were now smoothed up and put in, 12 inches apart, and fitted down on the clamps, which brought them on a level with the planksheer, and the cockpit was measured and framed up. A good, strong piece of oak 1½ inches thick was worked out for the bow and fitted to take the stanchion of oak for the heel of the bowsprit, and a piece of oak, 1½ inches thick with a hole 4½ inches in diameter, was put in directly over the mortise for the heel of the mast, with two stanchions and a galvanized rod running down through the keel for strength.

Next, a piece of 1-inch oak was screwed on to keel aft, and a hole bored and the galvanized pipe screwed in the keel to take the rudder post, using plenty of white lead to make a water-tight joint. The partners and knees were put in as on the plan and the chain-plates bolted to a piece of oak and fastened with brass screws from the outside of the boat. This method proved strong and effective (see Fig. 2). Three mahogany stanchions were put on each side of the cockpit to support the deck, and this finished all of the work below decks.

After everything was gone over thoroughly the stock for the deck was worked out of cedar (as there was enough left over after planking), which, when planed down, finished to about one-half an inch. After the deck was laid a very light canvas was purchased—84 inches wide—to avoid having any seams, and the deck was painted with thick white lead. The canvas was stretched over this while the paint was wet and tacked on the outside edge with copper tacks about an inch apart. This has proved quite satisfactory, but marine glue would probably have been better and made a smoother piece of work. The best compound for this work is Jeffrey's No. 7 black glue. This is of a softer quality than that used for decks and seams, and should be



SAIL PLAN, 15-FOOT KNOCKABOUT.



CONSTRUCTION of CENTREBOARD

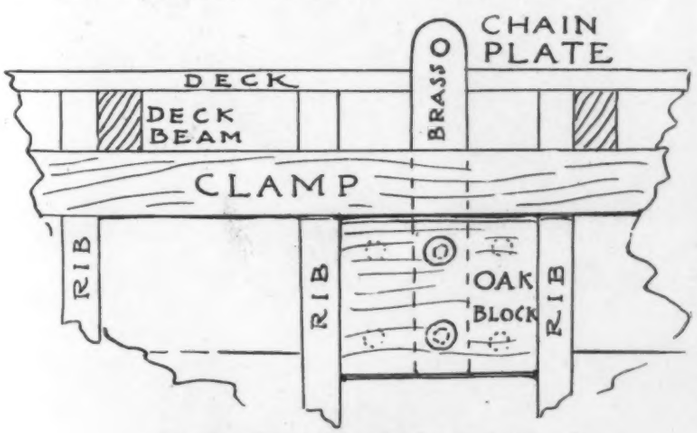
FIG. 3.

melted over a moderate fire and laid over the surface to be covered with a stiff brush, leaving a good body. Lay the canvas on this and press flat with an ordinary hot iron, so as to make the glue sweat through. There is a still softer quality—No. C—which does not require melting, if it is desired.

After the paint under the canvas had been dried the deck was given a couple of coats of linseed oil and a coat of deck paint. When this was dry the boat was turned over and the bottom planed and smoothed up, the seams payed or white-leaded and caulked with cotton. I would advise having this latter done by a professional, if possible, as it is a particular job, and if not done well the boat is apt to leak, and a leaky boat is liable to cause profanity. All holes and seams were then puttied and, after hardening, the waterline was marked with a steel point and the boat was turned right side up.

After it was blocked up, the oak skeg was bolted on with galvanized lag screws about 6 inches long. The first coat of white was now applied to the hull above the waterline and well brushed into the wood, and as the painting brought out her lines she looked like the real thing in boats.

Attention was now given to the coaming, which was made of ½-inch white oak. It required quite a lot of fitting before it was satisfactory. A block of mahogany was worked out for screwing it together at the pointed or forward end, and then the two pieces of wood were cut the right width and the coaming was bent and tied to get the curve, and laid on deck and fitted to



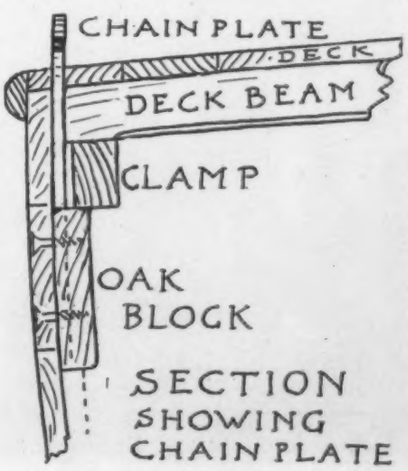
CONSTRUCTION of CHAIN PLATE & BLOCK

FIG. 2.

THE BOAT COMPLETED WAS A FINE-LOOKING LITTLE CRAFT, WITH NONE OF THE APPEARANCE OF A HOME-MADE JOB.

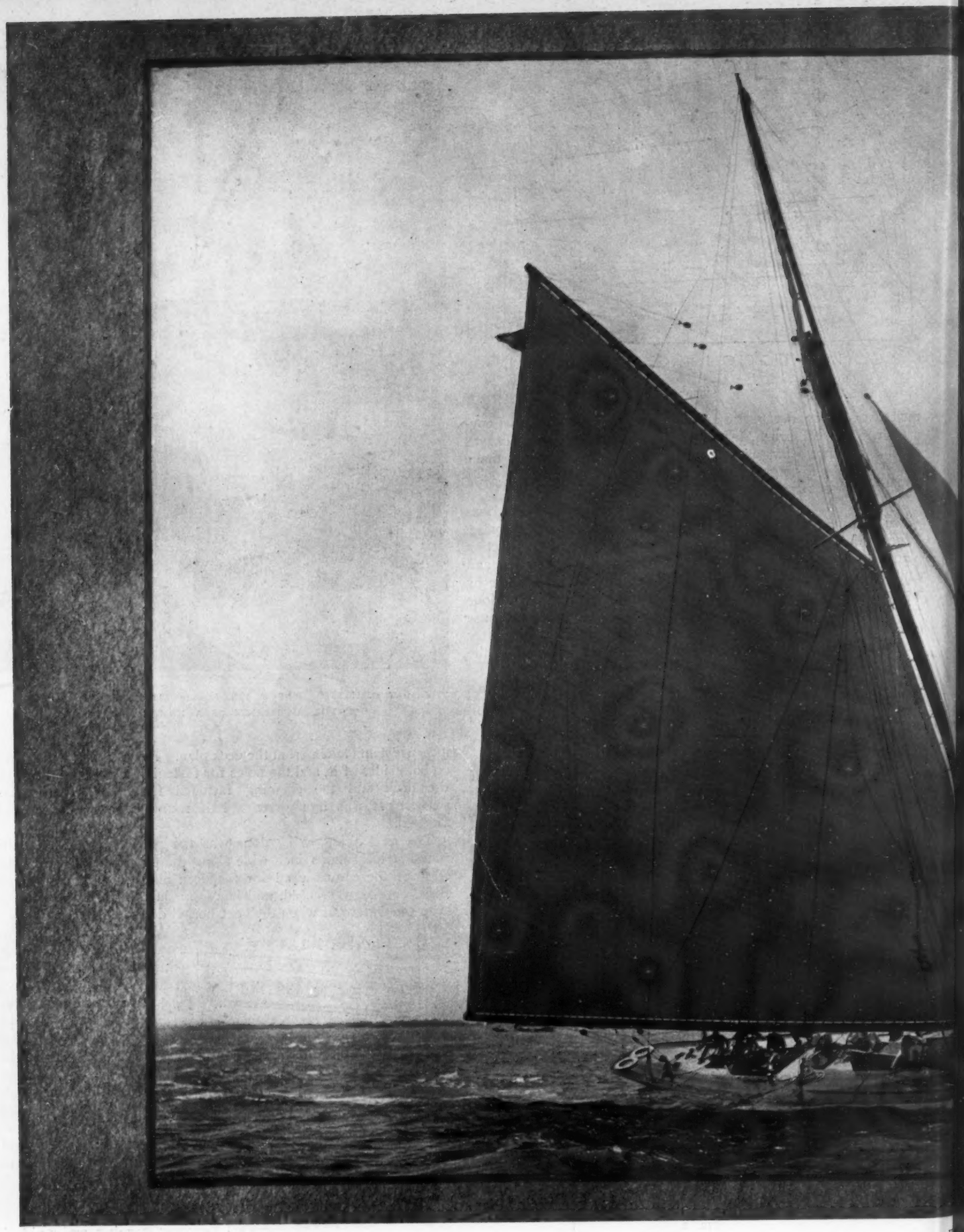
measurements taken from the deck plan. A pencil line was drawn on both sides of it, and the holes for fastening were bored through the deck and the coaming fastened from below with brass screws. It was then given a half round edge on the top and finished.

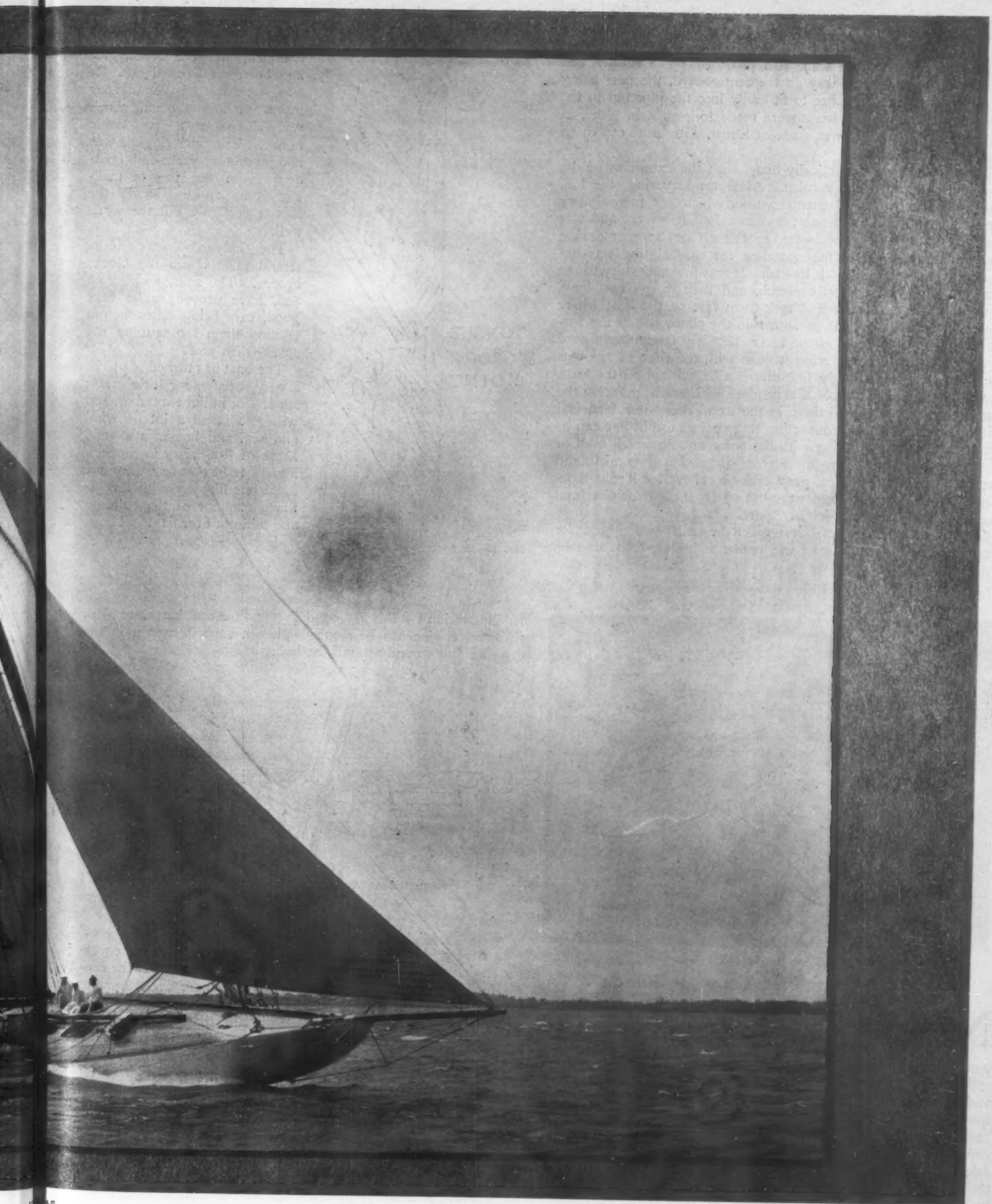
The next thing to be done was the putting on of the half-round strip of oak 1 inch wide along the plankshear to cover the edge of the canvas used for the deck and for a fending strip. Brass screws were used, and it was made as tight as possible to keep the water out when the boat heeled down.



SECTION SHOWING CHAIN PLATE

Work on the hull was now practically finished, with the exception of the rudder and centerboard. The centerboard was made of four pieces of oak ⅞ inch thick. A drawing was made full size from the plan, and the sections put together with ¼-inch galvanized rods about 8 inches long (see Fig. 3); not forgetting to put in the right place the piece of lead to carry the board down. A piece of oak was also put on the after end to keep it from warping, and a pin of





locust and rope pendant were also provided. The rudder was constructed in the same way as the centerboard, the post being of galvanized pipe of a size to fit easily into the pipe put in the boat, and two straps of brass were made to keep it in place, as on the plan. The tiller was made of locust, with brass cap to go on the rudder post.

The boat was now practically done, with the exception of the last coats of paint and varnish. After sandpapering, the hull was given two coats of enamel white, which has proved very serviceable. The bottom paint was anti-fouling green, and was put directly on to the wood—two coats then and another during the summer. To strike the waterline for the painting was not as difficult an operation as it looked. It was first necessary to see that the boat was perfectly plumb, and then to get two long, straight edges or battens and tack them fast on the boat where the waterline should come, as shown in the plans, one at the forward end and the other at the after end. By stretching a cord from one to the other, having it flush with the edge of the batten, you will get a straight line that can be marked on the boat. It will be necessary to hold this in place with brads, marking the line with points here and there in the wood every few feet, and with a long, thin batten connecting these points a thin line can be scratched into the planking with the point of a bradawl. All of the bright work was given three coats of good spar varnish, and the deck two coats of light gray deck-paint. After it was thoroughly dry the brass fittings were put on from the deck plan, and the craft was now ready for her spars.

The dimensions of these were taken by scale, and a hunt for clear spruce to make them of was made, and, after some trouble, obtained, and the boom, gaff and bowsprit worked out. It was decided to have a spar maker make the mast, which was done at a reasonable figure. The wire rigging was bought and a yacht-club boatman given the job of making the splices, and the Swede certainly did the work well.

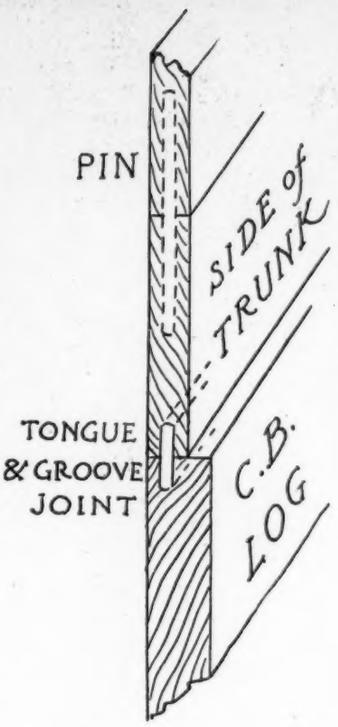
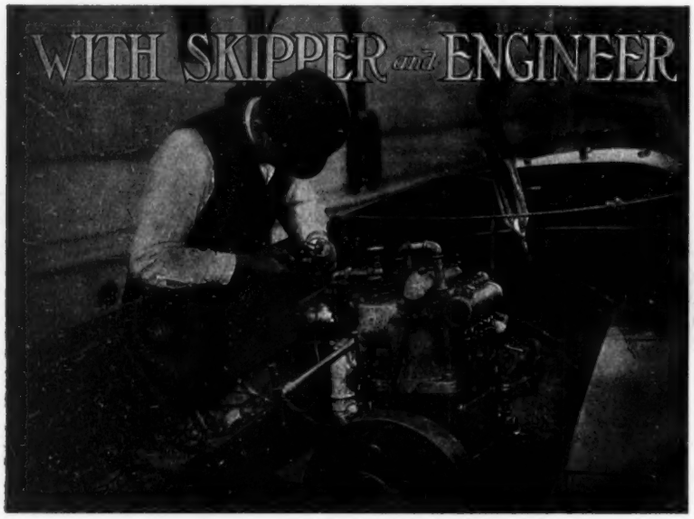


FIG. I.—SECTION OF C. B. TRUNK.

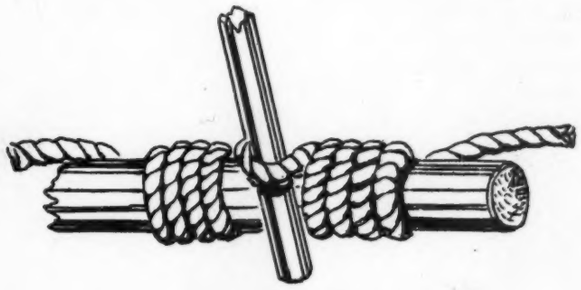
The halyards were four-strand manila and the blocks bronze. The sails, which cost $26, have proved to be very good, care being taken in not hauling them too taut on the spars when new.

The boat has turned out to be a very satisfactory little craft; she is fast in light weather, and will also stand a lot of wind and sea, and has won a good share of the prizes in the racing. I trust that any who may build one like her will have as much fun out of the building and sailing of the boat as I have had.



Substitute for Pipe Tongs or Stillson

NOW and then a man wants a big pipe wrench or Stillson when there is nothing of the kind within many miles. The sailor in such cases is not usually discouraged. He wraps many turns of a rope around the pipe or bar, puts a hand spike or a stout stick of wood of any kind in the bight (loop) and heaves away, as shown in the cut, holding the turns of the loose ends fast with the hand to bind them. Sometimes a nut can be handled in the same way, if it has some depth to it, the coils of rope being laid one on top of the other. The amount of friction obtainable by adding turns of the rope is limited only by the space on the pipe or bar. It may be easily made great enough to break the rope. The strength of the rope is the only limit. An illustration of this is found in the ease and certainty with which an engine can be stopped when a rope is caught in the propeller and wound around the hub.



PURCHASE AS A SUBSTITUTE FOR PIPE WRENCH.

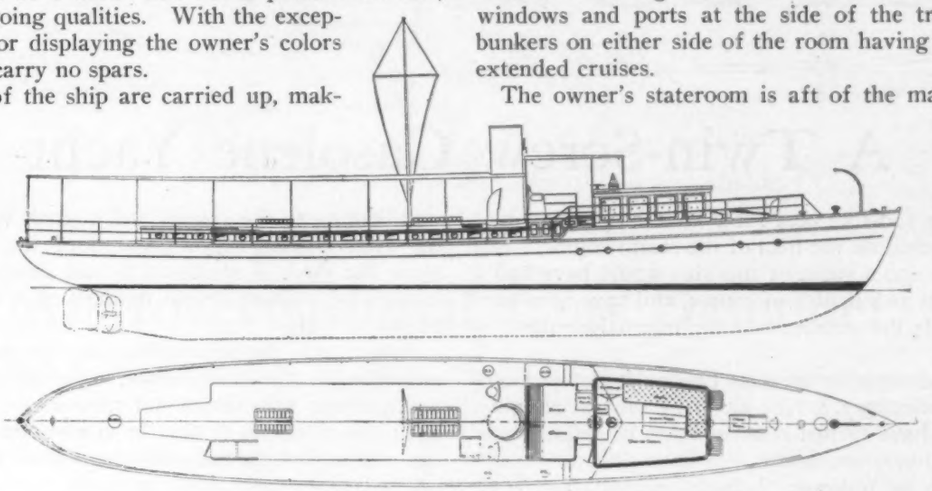
For Waterproofing Canvas

In covering boats for the winter, or in making canvas covers for engines of open boats, it is usually desirable to treat the canvas in some way to make it waterproof. There are a number of ways to do this. Some owners paint the canvas, others treat it with a coating of boiled linseed oil, and there are numerous other compositions that give more or less satisfaction. The following formula should make an absolutely waterproof coating: Get a small 10-cent bottle of rubber cement, such as is used for patching rubber boots, etc., and dissolve it in a pint jar filled nearly full of gasolene, shaking the bottle well until dissolved. Apply this on one side of the canvas with a paint brush, brushing in evenly, and let it dry thoroughly in the sun. This will leave the duck soft and pliable, doing away with the stiffness inseparable from paint or linseed oil; and while it may discolor slightly with the weather, it makes a good waterproof coating.

A 101-Foot Steam Yacht

FROM Messrs. Tams, Lemoine & Crane's plans George Lawley & Son Corporation, of South Boston, have laid down the lines and have begun the construction of a wooden steam yacht for a prominent Eastern yachtsman. This boat will be delivered early next season, and will be used in Long Island Sound and Eastern waters.

The principal dimensions of the craft are as follows: 101 feet 6 inches over all, 98 feet waterline, 15 feet beam, with a depth of 10 feet and a draft of 6 feet. She has a powerful model, showing excellent sea-going qualities. With the exception of a signal mast for displaying the owner's colors and signaling, she will carry no spars.



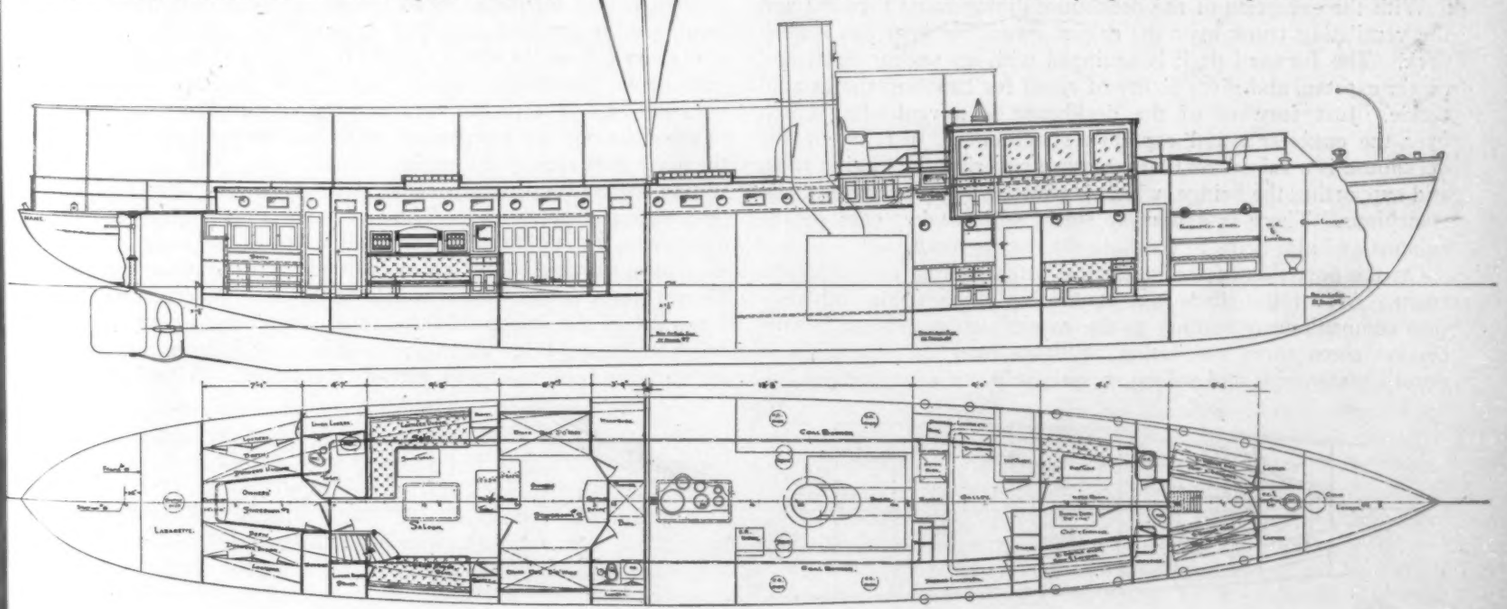
Forward, the sides of the ship are carried up, making practically a flush deck. There is ample room on this deck for the convenient handling of anchors, lines, etc. There is a large teak deckhouse forward. Aft of this house she has a long trunk cabin, with about 3 feet of deck space on either side. There is a large skylight over the engine room and one over the owner's quarters, in addition to the ports and small oblong windows in the sides of the trunk. This arrangement gives unusual light and ventilation.

The deckhouse, which is finished inside and outside in paneled teak, will be used as a dining saloon. This room is directly over the galley, and there is a dumb-waiter connecting the two. Abaft of the deckhouse is the bridge deck, at the after end of which is an athwartship observation seat. This arrangement has proved very popular. In addition to the bridge, there is a flush deck aft with ample room for chairs.

Below, directly aft of the forward bulkhead, is the crew's toilet room. This opens into the forecastle, in which are four berths, and companionway to deck. These quarters are light and airy, having full headroom. Next comes the captain's and engineer's room, with lockers, bureau, etc., and connecting with a toilet room. On the port side is the mess room. Aft of these rooms is the galley, which is the full width of the ship, and contains a coal range, large ice chest, and the usual dish racks, etc. Following the galley comes the engine room, which is enclosed by steel watertight bulkheads. This room has two large ventilators in addition to a skylight, and small windows and ports at the side of the trunk. There are coal bunkers on either side of the room having sufficient capacity for extended cruises.

The owner's stateroom is aft of the machinery space, and is separated from it by a double bulkhead, so as to deaden all noise. This room extends the full width of the ship, and has a berth on either side, dressing table, bureau and ample locker space, in addition to two chests of drawers. A bathroom opens off of this room. The owner's quarters open off the main saloon, which is just aft, and is the full width of the yacht. In it are a desk, table, transom seats and ample locker space. At the after starboard end of the saloon is a companionway to the deck. Underneath the companion stairs there is an unusually large closet. A passageway leads into a guest's room in the extreme stern. This room also has a berth on either side and communicates with another toilet room. The owner's quarters throughout are finished in mahogany and teak.

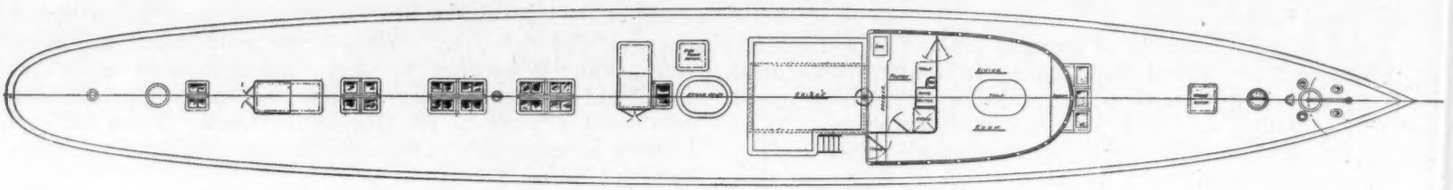
The yacht is of heavy construction, her keel being of white oak, as are stem and sternpost. The frames are also oak, double sawn. The planking is of yellow pine, with galvanized fastenings. There will be four bulkheads—a collision bulkhead forward, one at each end of the machinery space, and a partial bulkhead in



way of the strut. All these are of galvanized steel. At each side of the engine room there is a fore-and-aft steel bulkhead forming the sides for the coal bunkers. The rail, hatches, bridge, deck, companionway, etc., are of teak of unusually substantial design. There will be hot and cold water throughout, steam heat, and a most complete electric light plant, which has been carefully worked out.

The propelling machinery will consist of one triple-expansion, three-cylinder engine with keel condenser. She will have a water-tube boiler, and will show a speed of better than 12 knots an hour.

Three boats will be carried—a 17-foot launch, 14-foot dinghy and a crew's dinghy. The architects are supervising the construction of both yacht and machinery.

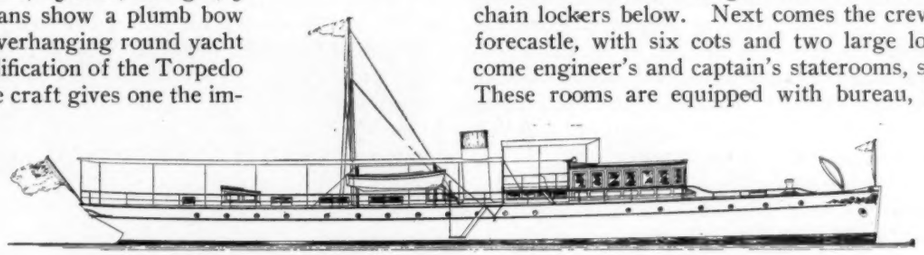


A Twin-Screw Gasolene Yacht

THE plans of this 120-foot boat show how the gasolene motor has encroached on the field of the steam engine. But a few seasons ago a yacht of this size would have had a steam-power equipment as a matter of course, and have been considered entirely outside the province of the internal-combustion engine.

This craft is from designs by the Gas Engine & Power Company and Charles L. Seabury & Co., Con., of Morris Heights, New York City, who have turned out a number of large power boats that have proved very successful.

The dimensions are as follows: Length over all, 120 feet; L. W. L., 114 feet; beam, 15 feet; draught, 5 feet 3 inches. The plans show a plumb bow and a combination of overhanging round yacht stern above, with a modification of the Torpedo type under water. The craft gives one the impression of speed, which is borne out by her ability to make a speed of 20 miles per hour, something unusual in a boat affording the accommodations which are offered by this one.



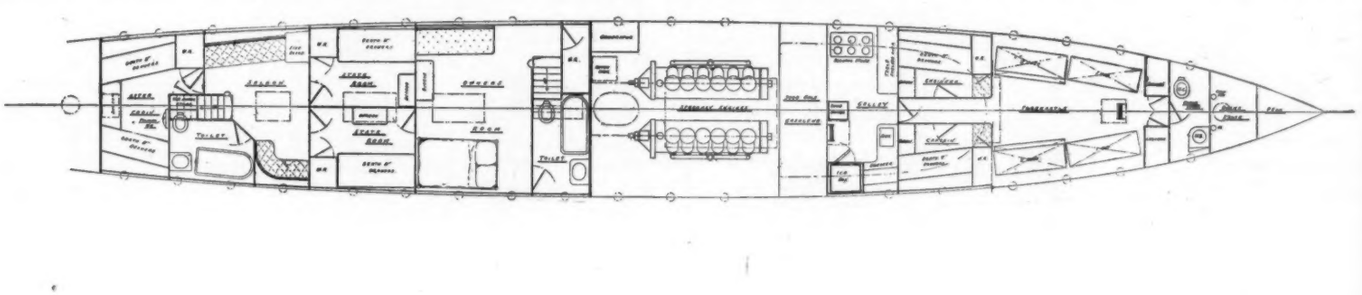
With the exception of the deckhouse dining-room forward and the ventilating trunk over the engine room, the boat has a flush deck. The forward deck is equipped with an anchor davit and power capstan, and gives plenty of room for handling the ground tackle. Just forward of the deckhouse is a ventilating hatch over the engineer's and captain's staterooms. Just aft of the deckhouse is a raised ventilating trunk covering the engine room and supporting the bridge, which is covered by awnings on metal stanchions. There is a dummy stack, which takes care of the exhaust and also helps to ventilate the engine room.

On the port side of the stack is a hatch leading to the engine room. Aft of the stack is a ventilating skylight and athwartship companionway leading to the owner's cabin. Next in succession come three ventilating skylights over the owner's and guest's staterooms and saloon, respectively, an after companionway leading to the saloon, and a small ventilating skylight over the after cabin. From forward of the bridge to the extreme stern the deck is sheltered by an awning supported on metal stanchions. There is one military mast for signaling purposes, placed well aft.

Below decks the accommodation plan shows a well thought-out arrangement for convenience, comfort and economy of space, and quarters for officers and crew are so situated that they may have instant access to and be in constant touch with the operating portions of the boat without necessity arising for their coming in contact with owner or guest. Just aft of the forepeak is the bosn's stores, through which run the chain pipes leading to chain lockers below. Next comes the crew's toilet, and then the forecastle, with six cots and two large lockers forward. Then come engineer's and captain's staterooms, separated by a passage. These rooms are equipped with bureau, permanent berth with drawers underneath, wardrobe and settee

The passage separating these two staterooms leads into the galley, in which is a six-burner alcohol stove, table, dresser, sink, large ice box, and a dumb waiter leading to the butler's pantry above. Next aft, and separated from the galley by a watertight bulkhead, are the gasolene tanks, of 3,000 gallons capacity. The engine room follows, in which are two 6-cylinder, 11-inch bore by 12-inch stroke Speedway engines, which will develop 250 to 300 horsepower. A separate auxiliary gasolene plant for electric lighting service, air compressor, bilge and fire pump is situated in the after port side of the engine room.

The engine room is separated at its after end from the cabin by a watertight bulkhead. The owner has a particularly spacious apartment, extending across the full width of the boat at almost its widest portion. This room is fitted with a double brass bed, bureau, large settee, and a wardrobe of very generous capacity. Forward on the starboard side is the owner's bathroom, containing a full-sized tub. Entrance to this room is by means of the athwartship companionway, already mentioned. Aft of the own-



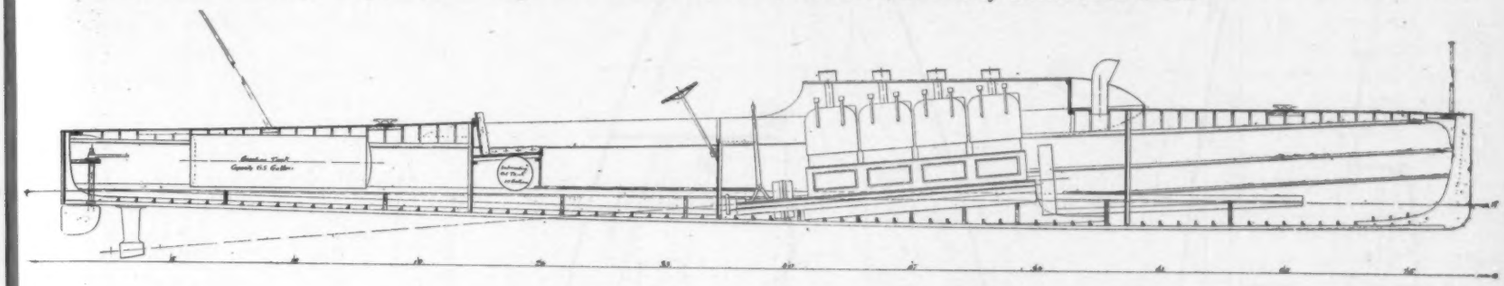
er's stateroom come two guests' staterooms, fitted with bureaus, wardrobes and berths with drawers underneath. The starboard room has a door leading into the owner's room.

Aft of these staterooms comes a saloon with sideboard and settees, one of which may be extended so as to form a berth. On the starboard side is a large bathroom, and a companionway leads from the saloon to the after deck. Still further aft, and entered from the saloon, is an after cabin with berths on each side, bureau and wardrobe.

As will be noticed by the plans, the weights of both fuel and power plant are carried well amidships, insuring buoyancy.

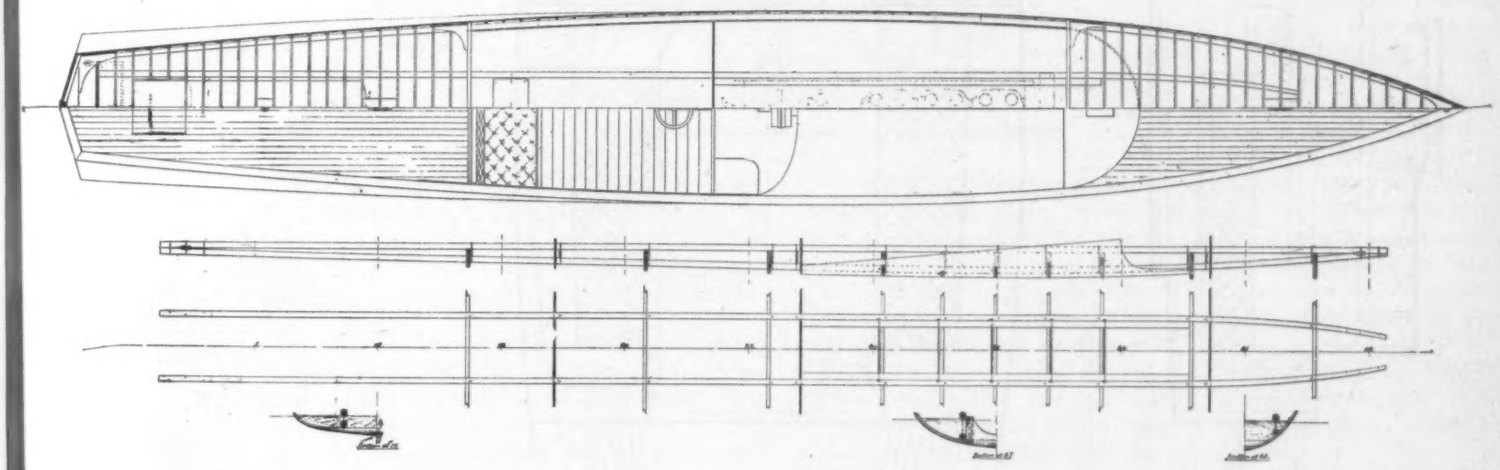
The crew have comfortable accommodations. Both captain and engineer are well cared for. The galley has plenty of elbow room, and the serving arrangements, as offered by the butler's pantry, are very complete.

The entire after portion of the boat, both above and below deck, is given to owner and guests. Although well equipped with port lights—there are eighteen on each side—every cabin is also supplied with a ventilating skylight. She should prove not only an able but an extremely comfortable craft.



An International Cup Defender

HEREWITH we publish plans of the boat designed by Henry J. Gielow for Frederic K. Burnham, with the original intention of entering her in the races for the Gold Challenge Cup of the American Power Boat Association on the St. Lawrence during the coming summer, and in such other motor boat contests for which she is eligible. Since the designs were drawn up the receipt of the challenge for the British International Motor Boat Trophy opens a still more important field, in which she may be one of the contestants.

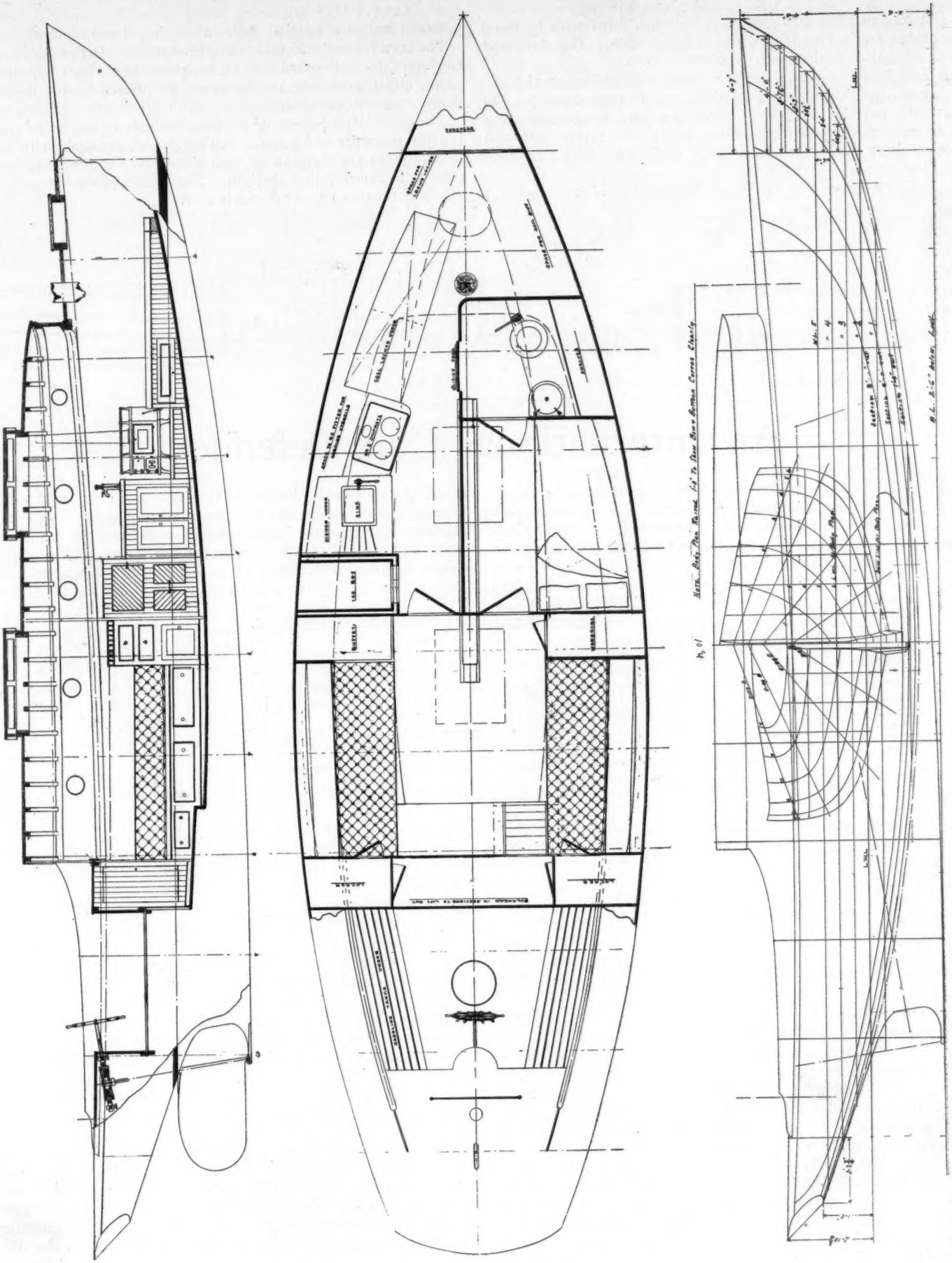


The boat is now in course of construction, and her motor is being tested previous to installation, so that there is no doubt of both craft and power plant being ready for her trial run by May 1.

The principal dimensions of this boat are: Length over all, 39 feet 11 inches; load waterline, 39 feet 11 inches; beam, extreme, 5 feet 6 inches, and a draught of hull not exceeding 10 inches. The waterline is fairly full, running in an unbroken sweep from the forefoot to the stern, and there are no hollows anywhere in her model. The deck is quite full forward, which, combined with a liberal freeboard, should make her an exceedingly weatherly boat in a seaway for one of this type. No extremely light construction has been attempted, her scantling throughout being substantial, although not heavy. Stem, keel and sternpost are of white oak, the frames are of selected oak, planed, steamed and bent to form, spaced 6 inches between centers, being made somewhat larger amidships and tapering gradually at the ends. The planking is double, the inside being of cedar and the outside of mahogany, with oiled silk between the two layers, all thoroughly riveted together with copper rivets. There is a long turtleback forward, and her afterdeck extends 9 feet forward from the sternpost. Both this deck and the turtleback forward are constructed substantially the same as the sides and bottom of the boat.

There are two longitudinal trusses of Oregon pine, extending practically the full length of the boat, and there are a number of transverse stiffeners, forming a thoroughly substantial backbone for the boat, and, in addition, forming the foundations for the motor.

The motive power will consist of an eight-cylinder Sterling engine, capable of developing not less than 240 horsepower. The builders have given a great deal of thought to the production of this motor, and nothing has been left undone that could contribute to a thoroughly successful outfit. The bedplate is of aluminum bronze, to secure lightness; but the other parts of the machinery are of the usual metals, carefully proportioned for the work required. The shafting will be of Tobin bronze, and the propeller manganese bronze, especially designed by Mr. Gielow for this boat.

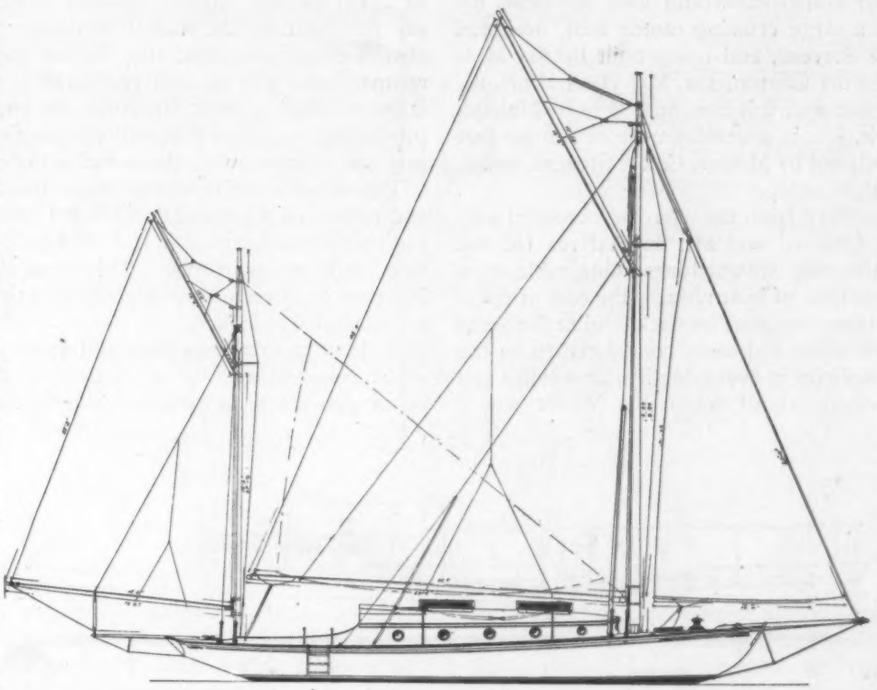


SHEER AND CABIN PLANS AND LINES OF 41-FOOT AUXILIARY YAWL.

A Shoal Draft Auxiliary Yawl

THE accompanying plans are those of a shoal draft auxiliary yawl, designed by Bowes & Watts for Mr. Charles F. Wall, of Philadelphia, for use at Ocean City, N. J. The boat is 41 feet 6 inches over all, 12 feet beam and 30 inches draft.

The accommodations in this boat are exceptionally large for a craft of her length and draft, there being 6 foot 1 inch of head room. They consist of a main cabin aft, with a double transom berth on each side with three drawers under each berth. At the forward end of this room there is, on starboard side, a wardrobe, and on the port side a chest of drawers with a grill around the top. Forward of the main cabin there will be a stateroom on the starboard side, with a double berth, and beyond the stateroom, and connecting with it, a toilet room. There is also a sliding door from the toilet room into the galley.



The galley and forecastle will occupy the port side forward of the main cabin. Usually on boats of this size the galley is a very small affair, and is tucked away in some corner where it is utterly impossible to cook a meal. By arranging the boat in this manner, with the center board trunk the dividing line, a large galley can be had, so that it is possible to get up a very good meal, and at the same time the paid hand, if one is carried, has a place to stay when below decks, where it is possible for him to stand up without putting his head through a hatch or skylight.

The engine will be located at the after end of the main cabin, partly under the bridge deck, and is a two-cylinder, 12-horsepower gasolene motor. There is a large water-tight cockpit that will comfortably seat ten or twelve people.

The boat has a generous and good-looking sail plan and it will be noticed that the jigger is large enough to be of some use, so that full advantage can be taken of the good points of the yawl rig. The boat is balanced up, so that her center of effort comes in the same position under jib and jigger as they do with the three sails set, allowing her to be handled through a squall under jib and jigger, or under mainsail alone.

A boat of this type can make, under power alone, 7½ to 8½ miles, as the deadwood has been cut out clear, to insure propeller efficiency, and no stern post is fitted aft of the wheel, as is usually the case, especially in boats altered to take an engine.

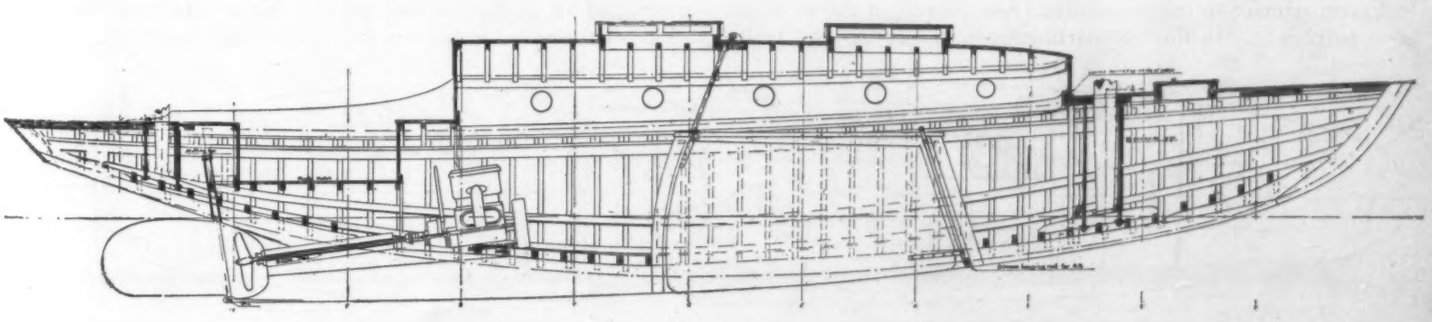
The lines are easy, with fair deadrise for this draft, and show a broad stern and a moderately fine bow slightly hollowed out near the forward end of the waterline. This has been done to prevent pounding in the short, broken seas found on the bars along the Jersey coast.

A boat of this type makes a very fine cruiser for Southern waters, or for the shoal waters and bays along the Jersey coast, and her rig should make her particularly handy for this sort of work. The sail plan shows a mizzen staysail, which may be carried when reaching to good advantage.

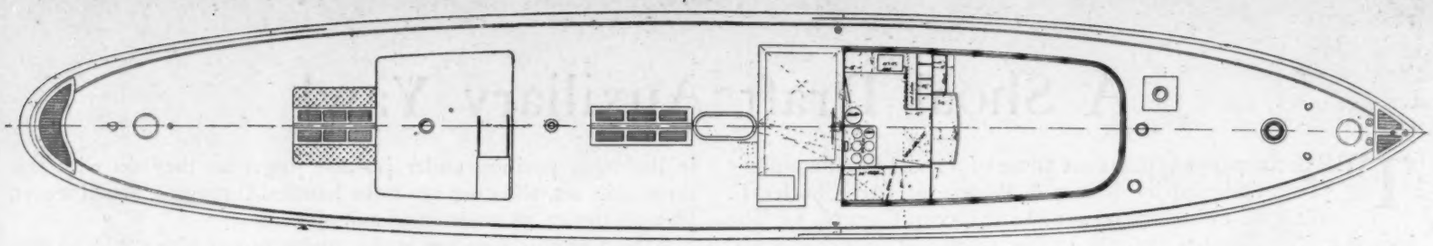
The cabin house is not high enough to spoil the looks of the boat, yet it gives full headroom, though she draws only 2½ feet. Two large skylights provide plenty of ventilation, and the accommodations are extremely generous for a boat of this size, and are made possible to a large extent by the beam. The arrangement of the stateroom and toilet, with doors from the latter opening into both stateroom and galley, is one that will be appreciated by all who have cruised in a small boat.

The deck beams, being carried across aft of the cabin house, form a bridge deck, not only adding strength to the boat, but allowing of the engine compartment being placed partly under it without encroaching too much on cabin space.

The gasolene is carried in a tank under one of the seats of the watertight cockpit, where any possible leakage will drain overboard.



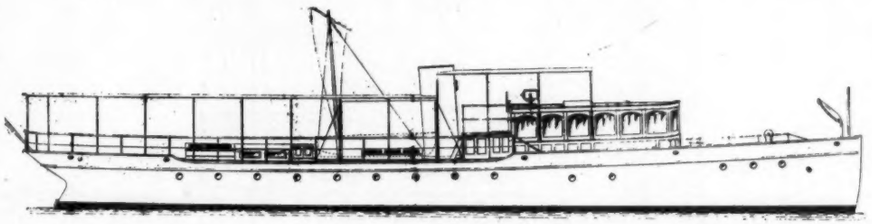
SHEER AND CABIN PLANS AND LINES OF 41-FOOT AUXILIARY YAWL.



Mahapa II—An 85-Foot Cruiser

THERE is now under construction and well advanced towards completion a large cruising motor boat, designed by Messrs. Cox & Stevens, and being built by the Matthews Boat Company, of Port Clinton, for Mr. H. A. Parsons, of Cleveland, Ohio. The name of this new boat is to be Mahapa II, and, as her plans show, she is a development of the 90-foot power boat Viator, also designed by Messrs. Cox & Stevens, which has proved very successful.

This design shows a departure from the narrow, low-sided vessels with long overhangs forward and aft, and strives for the maximum of accommodation and seaworthiness obtainable on a given over-all length. This type of boat reduces the cost of operation by the absence of unnecessary gear on deck, and at the same time produces what is now more and more considered to be the ideal cruiser, combining simplicity in every detail with solidity and staunchness. This type of vessel, of which the Viator was a well-known example, has the straight stem forward, an exceedingly full forward deck line, giving great flare to the sections, good beam, the breadth being carried well aft, and associated with an elliptical steamer stern, giving the maximum of room on deck worked into construction now adopted below water for sea-going steamers, in which the main body of the vessel is carried to the after end of the waterline and the rudder is hung below this. This construction is sensible for two reasons: First, because it gives the greatest possible room on deck, and in the quarters below, on account of the greater length on the waterline and greater possible width in the cabin floor; and secondly, because this very fact of increasing the waterline length produces a vessel on a given over-all length better able to maintain her speed under all conditions and capable of a considerably greater maximum speed with a given power than the shorter waterline boat would be capable of with the same length over-all; and at the same time the general appearance is pleasing and harmonious.



The Mahapa II is of the following dimensions: Length over all, 85 feet; beam, 14 feet; draft, 4 feet. Her power consists of two 4-cylinder, 60-horsepower Craig engines, situated amidships in a compartment entirely separated from the rest of the vessel by steel bulkheads. In this compartment are placed the fuel tanks, of 1,000 gallons capacity; also, a direct connected electric-light set for lighting the vessel throughout, including searchlight; also, lockers, transoms, etc., for the use of the engineer. This compartment will be well ventilated by a skylight over it and a large ventilating stack in which the engine exhausts are placed, producing a suction that will change the air in the engine room in a few minutes when the vessel is under way.

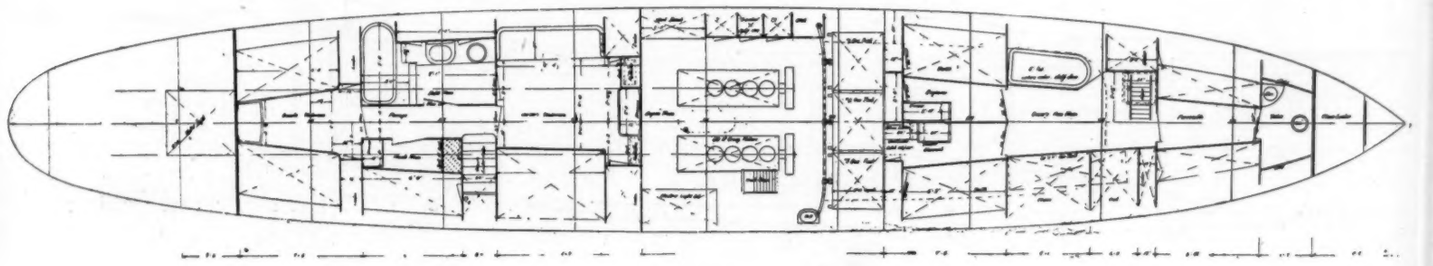
The owner's quarters commence directly aft of the engine room, and consist of a large stateroom the full width of the vessel, having on the starboard side a double built-in berth and on the port side a sofa and wardrobe. This room also contains a large dressing case or bureau, with plate-glass mirror and two seats, which are used also as lockers.

A door from the owner's stateroom opens into a passageway which connects with the stairs running to the deck. The owner's room also connects directly with the bathroom, situated on the port side of the passage, the floor of this room being tiled, and the room containing a 5-foot 6-inch bath tub, stationary wash basin, lockers, toilet, etc. On the starboard side of the passageway, opposite the bathroom, is a single stateroom, having built-in berth with drawers underneath, bureau, and seat arranged as locker.

The after portion of the vessel is utilized for a double stateroom, which opens into the passage, and thus has access to the bathroom. This room has a built-in berth on each side with drawers under same, bureau, plate-glass mirror and two wardrobes, and is well ventilated by an overhead skylight, as are all the other spaces below deck.

The dining-room is situated in the deck house, which is larger than usual on a vessel of this size, the dining-room itself being 11 feet long and having good headroom. The after portion of the deck house is utilized as a galley and pantry combined, making the service of meals very simple. Access to the dining-room is had on the starboard side of the deck house by means of a small lobby, which also connects with the galley.

The crew's quarters are below, forward, and unusually commodious. The captain and the engineer each have a separate room, and all of these rooms are in a space extending the whole width of the vessel, used as a mess room and storeroom, and also

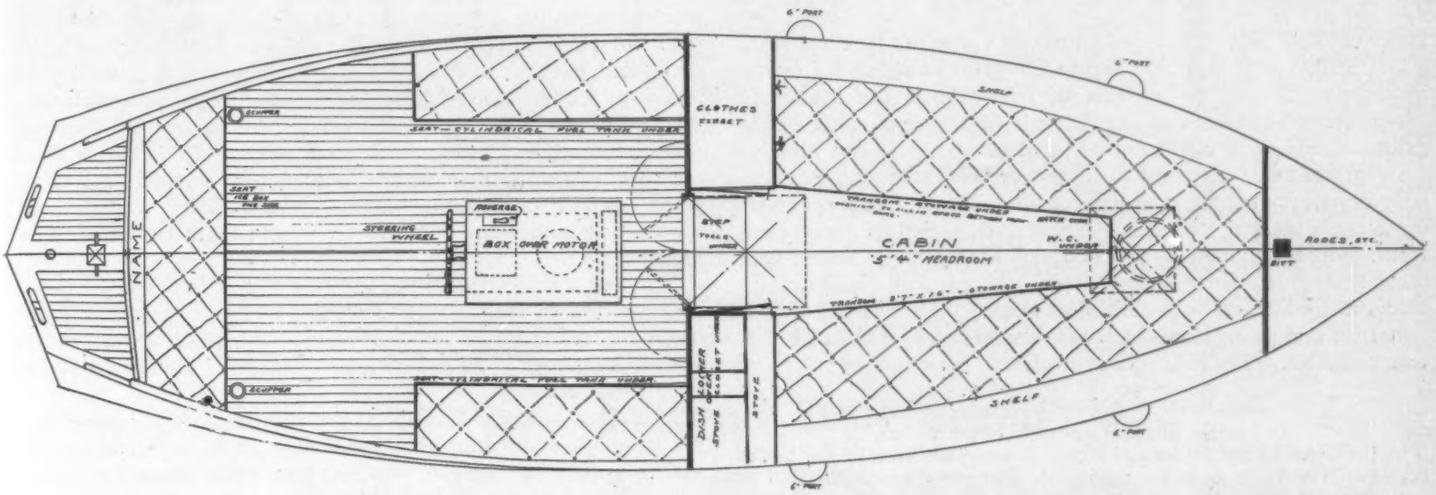


having a bath for the use of the crew. Forward of this space, again, comes the forecastle, having the necessary pipe berths for the crew and connecting with the crew's toilet, which is in a separate compartment by itself.

The construction of this boat is of the very best, planking being of yellow pine; frame, keel and deadwood of selected oak; fastenings being of copper or composition. The entire deck house is finished in selected Honduras mahogany, and all the skylights, hatches, hand rails, etc., are also of mahogany.

The finish below in the owner's quarters is Colonial in style, the furniture, doors, berth fronts, etc., being of mahogany and the balance of the trim white enamel rubbed down to a dull finish. The equipment is to be very complete, with a power tender and dinghy, and Mahapa II promises to be one of the most comfortable boats ever built.

She will make her headquarters at the Lakewood Yacht Club, Rocky River, and will cruise, for the most part, in the Great Lakes, Georgian Bay and Lake Superior, this district being well known to Mr. Parsons, who has cruised there for many seasons.



A 25-Foot Cruiser

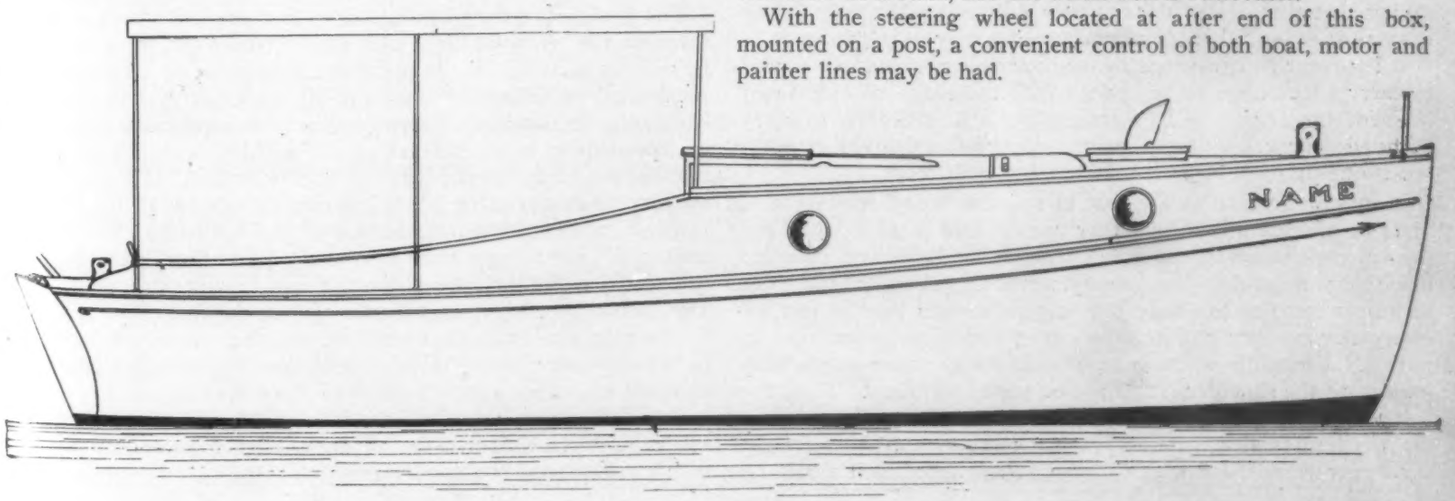
FOR comfortable living quarters and all-round good qualities the design shown here from the board of W. J. Deed, Jr., of Boston, Mass., is a very good combination. She is 25 feet over all, 7 feet 8 inches breadth, and 2 feet 5 inches draught. It will be noticed that the breadth is much greater than that usually given a 25-footer; but no tubbiness results, as the deadrise is great, and there is more boat above water only. With a 7½-horsepower motor installed, a speed of about 8 miles an hour is expected, and two fuel tanks under the cockpit seats will provide gasolene for fifty hours' running.

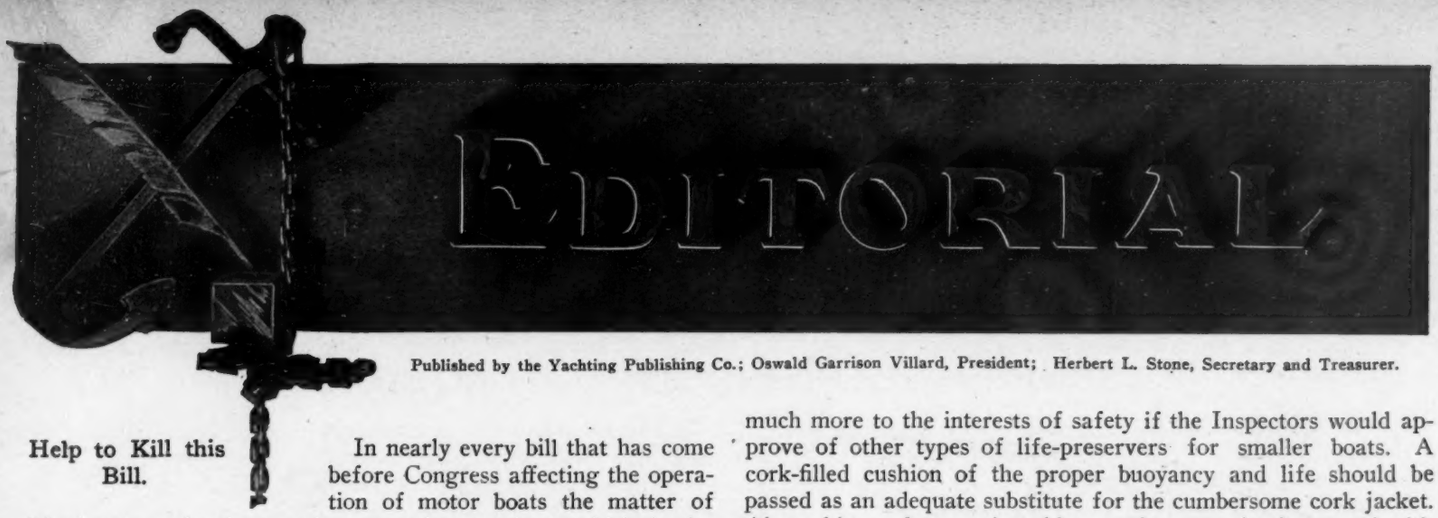
Forward is a storage space for anchor, rodes, etc. Then come two transoms, 8 feet 7 inches long and 18 inches wide, with storage space under. At forward end of cabin is a toilet, under the transom. On the starboard side aft is a locker with zinc-lined top for stove, and over stove are a couple of dish locker shelves. On the port side opposite is a large clothes closet; ice box is in cockpit. It will be noticed that the engine is entirely removed from the cabin, as well as the gasolene. This has its peculiar advantages, and is well worth the trouble of planning. The headroom, of 5 feet 4 inches clear, is considerably better than the average, yet she will not look tubby or top-heavy on account of the handling of the lines and the extra beam.

The stern selected will not allow her to settle aft, and the bow will flare considerably, which, together with the tumble-home quarters and the raised freeboard, will produce a good sea boat.

The engine is a 7½-horsepower single cylinder, turning a 22"-30" propeller at 500 revolutions. While the motor is under a covering, it will in no way be inaccessible. There is plenty of clearance all around, and the whole box is removable.

With the steering wheel located at after end of this box, mounted on a post, a convenient control of both boat, motor and painter lines may be had.





Published by the Yachting Publishing Co.; Oswald Garrison Villard, President; Herbert L. Stone, Secretary and Treasurer.

Help to Kill this Bill.

In nearly every bill that has come before Congress affecting the operation of motor boats the matter of life-preservers has been an important item, and one which, in the nature of things, is vital to motor-boat owners. So far, none of the requirements in regard to life-preservers have been particularly drastic; but there is at present a bill before Congress (having already passed the Senate) which, if passed in its present form, would undoubtedly work great hardship to motor-boat users throughout the country. This is Senate Bill No. 5143, introduced by Senator Frye, and now before the House of Representatives and in the hands of the Committee on Merchant Marine and Fisheries. The bill, as it stands now, is as follows:

AN ACT

To require life preservers on motor vessels.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That every vessel propelled by machinery other than steam machinery shall carry life preservers of kinds approved by the Board of Supervising Inspectors, so that there shall be at least one for each person on board.

Section 2. That all life preservers shall be so stowed that their position may be known, and that they may be readily accessible to those for whom they are intended.

Section 3. That for any violation of this Act the vessel shall be liable to a penalty of one hundred dollars for each such life preserver lacking or improperly stowed.

Section 4. That this Act shall take effect on and after June first, nineteen hundred and ten, but shall not be applied to foreign vessels until on and after December thirty-first, nineteen hundred and ten.

Passed the Senate January 24, 1910.

Attest: CHARLES G. BENNETT, Secretary.

It will be seen from this that every motor boat, no matter what size or for what purpose it is used, is required to carry a life-preserver of the kind approved by the Board of Supervising Inspectors for every person carried in the boat, under penalty of $100 for each life-preserver lacking.

We are heartily in sympathy with every effort made to safeguard life on pleasure boats, but we cannot be too emphatic in saying that the present bill not only does not add to the safety in small boats, but that the provisions of it may defeat its ends.

It is proper and just that motor-boat owners should be forced to carry enough life-preservers to float those aboard in case of accident, but at present it is practically an impossibility to carry the kind approved by the Board of Supervising Inspectors without taking up most of the available room in the boat.

Moreover, in case of accident in a motor boat life-preservers must be of such a kind that they can be used instantly, and the present cork jacket in use is not only cumbersome and takes up much more room than is necessary, but it is practically impossible to adjust same to the body properly in a small boat in case of emergency, as they require freedom of action and some time to put on. Especially in the case of children are they worse than useless, as the shoulder straps are of such length as to allow the belt to hang around the legs instead of the body, thus throwing the head under water. These preservers may be all right for larger vessels, for which they are designed; but it would be much more to the interests of safety if the Inspectors would approve of other types of life-preservers for smaller boats. A cork-filled cushion of the proper buoyancy and life should be passed as an adequate substitute for the cumbersome cork jacket. Air cushions of a certain cubic capacity may also be passed with safety, as both of these could be serving a useful purpose when not in use as a life-preserver, and could be carried in the cockpit or on deck, where they would be immediately available, and would float as great or even greater weight than the regular life-jackets.

Not only this, but we fail to see how the government, with the vast number of motor boats scattered over the country to-day, could enforce this rule equitably; and if it cannot be enforced in the same manner in all parts of the country, it should not be put upon the statutes.

If this matter were brought to the attention of the proper people it would seem that better provisions could be made for the safe-guarding of life on small motor boats than the above. There should be some concerted action taken in the matter, and it is practically up to motor-boat owners and the various organizations to see that Senate Bill No. 5143 in its present form is defeated. The time left, however, is short, as the bill goes into effect June 1 next, if passed. It is up to those who are vitally interested in the sport to write to their Congressmen, calling attention to the defects in this bill and stating the reasons why the present form of life-preserver should not be insisted upon in boats under 30 feet in length. The motor boat and yacht clubs should also take action as a body and bring what pressure they can to bear on the Congressmen of their districts to insure a more equitable bill and one better suited to the requirements of small boats than this one.

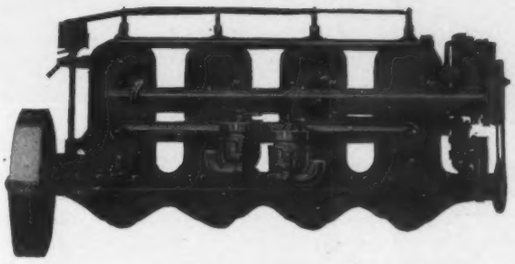
Get Started Early.

By the time this issue reaches our readers the canvas covers and pent houses will be off the boats and the season of 1910 will be under way. The season itself is full of promise, and from all indications there should be a fuller year in the sport and more boats afloat than ever before.

The duration of the yachting season in these latitudes is all too short, and it behooves those who want to make the most of it to be overboard early. So do not waste time thinking about it, but get to work on your craft at once or place your order now to have her put in commission. Remember that this work takes time and is dependent in large measure on the weather, and if you want to come out early, do not delay in getting started. Help around the yards is always scarce in the late spring. Every one is anxious to get his craft overboard, and delays are inevitable. So do not wait until May to have your work started and then anathematize the yard foreman or the builder for not having you ready by Decoration Day, when, as a matter of fact, the fault is your own.

The man who has a boat small enough to do the work himself is to be envied, perhaps; for, while he may have many trials, the pleasure of working out-of-doors on his own craft in the early spring days is something that the man who has his work done by others misses. This is a threadbare subject, I know, but let us take it to heart and get busy. Here's to 1910!

To the man who owns or plans to own a speed boat:



The four-cylinder Extreme High Speed Vim Motor.

Bore and Stroke 5x5 inches.	Bore and Stroke 4x4 inches.
3 cylinder—35-40 H.P.	2 cylinder—12-15 H.P.
4 cylinder—40-55 H.P.	3 cylinder—19-23 H.P.
	4 cylinder—26-31 H.P.

IN our announcements of the past few months we have said the new Extreme High Vim Motor is the most perfect two-cycle engine built; and that it develops more power and higher speed than any other engine in the world of like dimensions.

We have stated nothing more than simple facts.

They would be sensational, no matter how stated—but they are facts.

This new type of the Vim is as simple and uncomplicated in design as the Vim line has always been; as rugged and staunch in construction; and maintains the perfect Vim balance and proportion between power and weight.

It is, in short, an engine with which you should thoroughly familiarize yourself before you buy a motor for the coming season's boating.

The New Extreme High Speed

VIM MOTOR

The Most Perfect Two-Cycle Motor Made

It is a fact that the ordinary two-cycle engine delivers its maximum power at 750 to 800 revolutions per minute. Above that engine speed power falls off because the speed is too great to permit sufficient gas to be drawn through the intake port.

Hence the two-cycle has heretofore been considered unsuitable for the very high speed work.

The manner in which we have eliminated this problem in the new Extreme High Speed Vim represents the greatest advance ever made in two-cycle construction.

This motor is provided with a double set of carburetors; a double fuel pipe and a secondary port.

So that, at engine speeds up to 1300 to 1400 revolutions per minute, the crank case fills with fuel mixture ample in quantity to produce two-thirds more power than by the single carburetor and intake pipe method.

Repeated tests by disinterested parties showed that at an average of 1268 revolutions per minute the actual horsepower developed with a two-cylinder (4" x 4") Extreme High Speed Vim was 16.4—whereas the best an ordinary two-cycle could do was 10 horsepower.

This feature is peculiar and exclusive to the Extreme High Speed Vim.

It is the ideal solution of a problem which has long baffled gas engineers; for it adds neither weight nor complication to the utterly and beautifully simple Vim.

It can be readily seen that this new Vim's development of power is really greater, and the speed consequently higher.

No other engine presents so many superiorities, aside from power and speed, as this.

WHY AND HOW THIS VIM DEVELOPS ITS EXTRAORDINARY POWER AND SPEED

The phantom sectional view herewith shows the cylinder construction of the Extreme High Speed Vim Motor. It will be seen that the piston is at the top of the stroke, in which position the ports are uncovered, and it is at this moment that the charge of fuel enters the crank case, being drawn in by the vacuum created by the upward travel of the piston.

It will be seen that the port or opening at the left is smaller than the port at the right. The port at the left is of the size found to be best in gas engine practice and gives as much power as any regular two-cycle motor, but it is when the port at the right is used in connection with its separate opening and carburetor that a greater quantity of fuel mixture is drawn into the crank case at high engine speed, actually producing two-thirds more power than any other engine of like dimensions—two or four cycle—can develop.

It is neither underweight, nor overweight; but proportioned so nicely to its power development that it will stand up under three to six times the hard work that can safely be imposed upon any other speed engine.

Before you lit out your boat for the season; or before you buy a new motor—get all the information you can about this splendid, sturdy Extreme High Speed Vim.

Simply clip the coupon, fill the blanks and mail it.

THE VIM MOTOR MFG. CO.,
436 Market St.,
Sandusky, Ohio.

Please forward at once the Vim catalog, and literature pertaining particularly to the Extreme High Speed Vim.

Name .....

Address .....

The VIM MOTOR MANUFACTURING CO.

436 Market Street, Sandusky, Ohio

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OTTO GAS ENGINE WORKS
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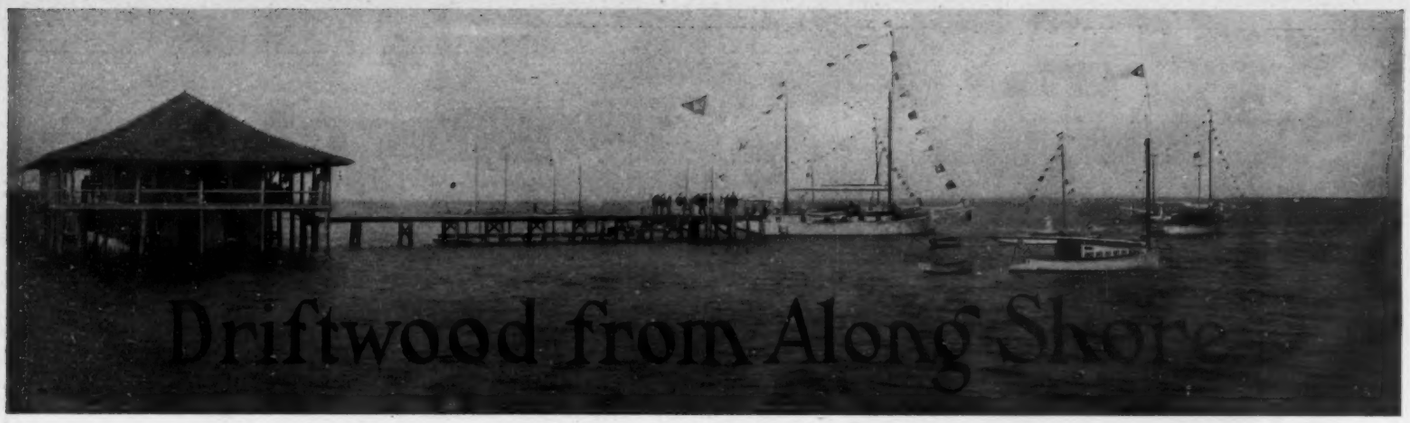


Driftwood from Along Shore

BISCAYNE BAY YACHT CLUB, MIAMI, FLA.

Buffalo, N. Y.

WITH the coming of the spring days yachtsmen are wandering down to the Lake front to have a look at their boats and at the same time talk over plans for the season. That this will be an unusually busy year for both the sail and power boat clubs at Buffalo is very evident from early indications. Already there is talk of a series of races between the two rival power boat organizations—the Launch Club and the Motor Boat Club—that will put all former contests in the shade, and the season hasn't even opened yet.

The Yacht Club, too, is making plans for a regatta which will excel any held in recent years, both in the number of events and prominence of the competing craft. Arrangements for these races have been left in the hands of a committee headed by Harry Smith, and the details will be announced next month.

The power boat races between craft from the Motor Boat Club and the Buffalo Launch Club will be run over the course in the Niagara River as they were last year, but there will be more events and keener rivalry. The races will be run on Saturday afternoon, and cup events will probably be pulled off about every two weeks. In addition to the local contests a number of high-speed boats from other ports will compete here in the Inter-Lake Championship races.

The Buffalo Launch Club has had a brilliant idea, and all the members are very enthusiastic about it. In brief, the plan is to organize a new power boat association, the territory of which will extend over the Great Lakes. A meeting is to be held here at which plans for launching the new venture will be discussed, and an organization may even be perfected at that time. The new association will not only take in all the clubs along Lake Erie and the upper Lakes, but those of Lake Ontario as well, both American and Canadian. In this way it will be possible to arrange international contests, and some valuable trophies are already in sight. The Canadian clubs have shown particular interest in the proposed organization, and if international races are arranged they will put up a formidable front with both speed boats and cruisers.

"Yes, there are lots of power boat races, but at many of the regattas power boating is made secondary to sailing," said a member of the Launch Club, in explaining what the new association proposes to do. "What we want is an association where there will be only one sport talked of or thought of, and that one motor boating."

It is now known that the new home of the Motor Boat Club on Grand Island will be ready for opening on Memorial Day, but whether that will be the date set for the house warming has not been announced, though active members of the club say that in their opinion it will be. The hitch lies in the fact that the new commodore, Henry Thorp Vars, betook himself to the West Indies a month ago without announcing his committees, consequently there is no entertainment committee to go ahead with the plans. However, Commodore Vars is expected back in a few weeks, and when he arrives plans for the opening will be made.

Members of the Yacht Club, who take the Crystal Beach ferry back and forward to the shelter on Point Abino, will be delighted to know that Cyrenus Michener has won his "law suit," and that they can go from the Point to Crystal Beach in Michener's trim little launch, as heretofore, without having to resort to the unpleasant alternative of a 4-mile drive over the sand, as would have been necessary had the ferryman lost in the courts.

Soon after the first shelter house was built on Point Abino, Michener conceived the idea of running a ferry across the bay for the convenience of club members who did not cross in their own boats. His ferry was a huge success for several seasons, but one day the ferryman incurred the dislike of the Point Abino Sand Company.

Notice was served upon him that his dock and boathouse were on the land owned by the company, and that he would have to move them. This was equivalent to an order to give up his ferry line, as there was no other available location on which the sand company would not have equal claim. So Michener decided to fight. The case was carried to the courts in Toronto, and there it was found that the ferryman's contention was correct, and that he is on government land.

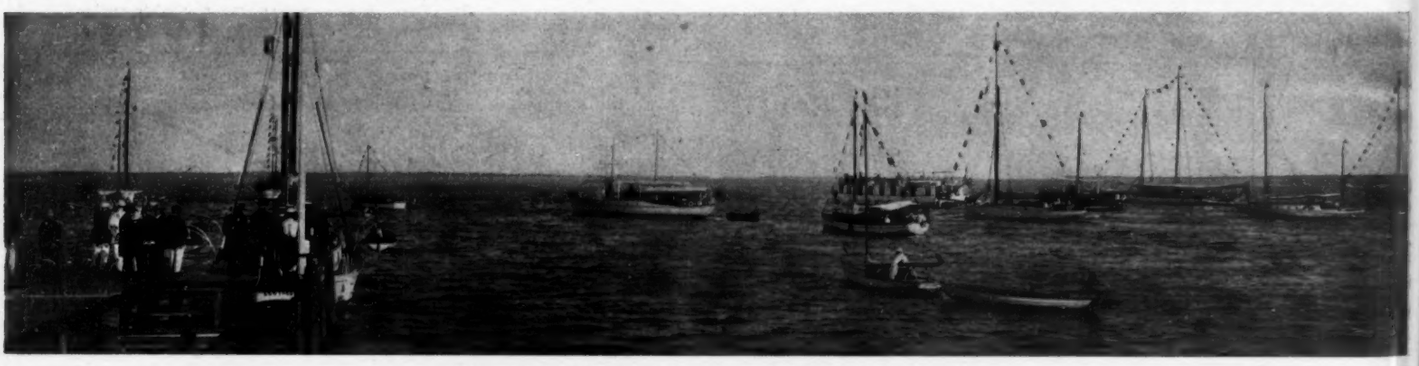
C. B. McCUAIG.

From Biscayne Bay

The Miami club house of the Biscayne Bay Yacht Club was opened Tuesday afternoon, February 15, when Acting Commodore W. J. Matheson, of Cocoanut Grove, broke out the flag of the yacht club. The score or more of yachts anchored near the club house dipped their ensigns and saluted the flag, dressing ship, and several of them fired a salute. The Royal Palm Hotel orchestra played popular airs when the guns were fired, and the picture was a beautiful one.

The Biscayne Bay Yacht Club was twenty-three years old on February 22, and is the oldest yacht club on the east coast of Florida. Commodore Robert M. Thompson, who was elected last year, was unable to attend the opening ceremonies on account of his absence abroad.

Among the yachts attending the ceremonies was the Scallop, with Mr. and Mrs. Lewis Quentin Jones, Mrs. Charles Coster, of New York, aboard; the Tigress, with Mr. and Mrs. Harrison B. Moore and party aboard; the Novia, with Mr. Geo. H. Van Vleck, of Toledo; Bonito, Loon, Edris, Saramar, the houseboat Everglades, Dragon, Lois, Mr. Richard Ravenhall; Grey Duck, Tarragon and many others. The fleet included yachts of the Biscayne Bay Yacht Club and from other parts of the bay.



YACHT ANCHORAGE FROM BISCAYNE BAY YACHT CLUB DOCK.

Don't run YOUR Boat this Year without a Patterson Wireless Battery Holder!

Of course you need a Waterproof Battery Box!—that's admitted by everybody now-a-days! Don't say,—"My batteries are in the cabin and never get wet in there," for you must realize every foggy night or rainy day when the cabin feels damp, that you are losing Battery energy, unless they are in a Waterproof Cabinet—

Model GL-6. 6 Cells in Series—Single Row.

In THE PATTERSON WIRELESS DRY BATTERY SYSTEM a SCREW TOP DRY BATTERY CELL without wires or binding posts, screws into one solid Hard Rubber Plate, automatically making all connections. This Hard Rubber Plate forms a Solid Substantial Waterproof cover for the Battery Box, and as all contacts are moulded solid into this Rubber Plate, no possible loosening of connections, bad contacts, trouble from dampness, or anything of this sort is possible. The Battery Cells are SUSPENDED from the Plate and do not rest on any surface where dampness can collect.

Model C-12 2 Series of 6 Cells.

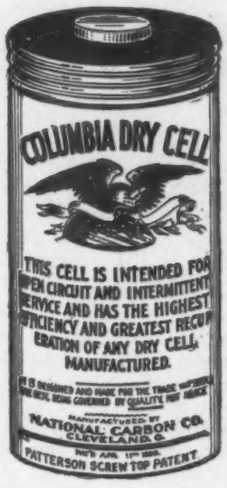
Renewing a Set of Batteries with the

PATTERSON WIRELESS DRY BATTERY SYSTEM

Model C-6. 6 Cells in Series.

is as easy as putting in a half dozen Incandescent Lamps — and though done quickly, it can't be done wrong by the most inexperienced person; individual cells may be tested with Ammeter without removing Cells from Holder.

Cabinets are ABSOLUTELY WATERPROOF even though all under water, for over entire inside surface of Cabinets a heavy seamless layer of Neptune Semi Rubber Compound is flowed, and between Plate and Cabinet is a Soft Rubber Gasket. Outfits have substantial leather Carrying Strap.


COLUMBIA DRY CELL
THIS CELL IS INTENDED FOR OPEN CIRCUIT AND INTERMITTENT SERVICE AND HAS THE HIGHEST EFFICIENCY AND GREATEST RECUPERATION OF ANY DRY CELL MANUFACTURED.
MANUFACTURED BY NATIONAL CARBON CO. CLEVELAND, O.
PATTERSON SCREW TOP PATENT

Cartridge Screw Top Dry Cell. Now regularly made by all Dry Battery Manufacturers.

MULTIPLE and COMBINATION PLATE OUTFITS have every advantage of the BEST Storage Battery—with none of the objectionable features, such as delay in charging—sulphating—corrosion and acid fumes.

MULTIPLE and COMBINATION OUTFITS (see lower left hand cut) will positively give three to six times the mileage of Single Series Outfits and should be used for All Multiple Cylinder Engines.

EMERGENCY CLIPS are provided so old style Binding Post Cell can be used any time Screw Top Cells are not at hand.

Model A-4. Strip Type—to be screwed up under locker or deck

Model GU-26. Combination Plate.

A Wireless Battery Holder will not only maintain a Set of Batteries at HIGHER AMPERAGE, but will, in a year or so, save the Motor Boat Owner its entire cost from the greatly increased life each Set of Cells will give, because of the Holder's scientific design for their protection and economica maintenance.

Send for Bulletin 37

Model CL-6. 6 Cells in Series—Single Row.

STANLEY & PATTERSON, 23 MURRAY ST.—27 WARREN S. NEW YORK CITY, N. Y., U. S. A.

Pacific Bubbles from San Pedro, California

Through letters to the newspapers and otherwise I have been trying to see what could be done toward getting Capt. Howard Patterson, the president of the New York Nautical College, to spend next summer in Los Angeles, for the purpose of giving instruction to those who go down to the sea in ships. Capt. William Banning, the owner of the oil-burning Companero, described in the February issue of YACHTING, has just returned from taking a course at the New York College, and although he has held a captain's license for many years there were some points on which he wanted coaching. The lists of alumni of the Patterson college prove that the finest sailors in the world seek further schooling, and Mr. Banning is one of these. He believes that at least thirty yachtsmen and professionals will signify their willingness to take some of the courses, in navigation or otherwise, and to assist the project he will guarantee two $50 courses for his employees. If twenty-five persons send in their names a formal proposal will be made to Capt. Patterson.

If any one could see the way so-called sailors try to bring yachts to their moorings in this neighborhood he would appreciate that at least half a dozen Capt. Pattersons are needed right here; but our ideas are for the general future rather than for the present, and in the trans-Pacific yacht race between the vessels of California, Canada and Hawaii there is small hope of attracting the attention of the New York fraternity until some one who meets the Eastern yachtsmen socially can give them his personal experiences, and tell them how charming the trans-Pacific racing is. What we really need is a Mikado or a German Emperor to boost us into prominence by the magic of his royal name.

Talking about the decorations on the compass cards, John Hamilton, club man and Pacific Coast pilot, tells of a redheaded Scot recently engaged at Eureka because he was strong. "He certainly had a heavy hand on the wheel," said Capt. Hamilton. "When I came on deck the first morning he was a long way from full and by, and he had us going hell-to-split over the prairie, with the deckload hanging on chiefly by the chains. 'How is she goin'? says I, expectin' him to tell me his course. 'She's goin' fine,' says he, and he smiled as he rolled her down on her beam ends. 'Look at your compass, man, and tell me how she's headin,' said I.

" 'She's headin', says he, and he took a long look at the compass, perhaps for the first time, 'she's headin' just two notches from the bunch of flowers to the right.' "

Among amateurs a sharp command sometimes seems wholly uncalled for when a guest is out for his first trip. The broad centerboarder Brunette, of San Pedro, did not steer extra well when laid over till her rudder was partly out of water, and it was necessary to work the jib sheets from the cockpit—to have 'em handy. A chap called Gunning was with us on his first cruise, when a hard puff laid us decks under, and the owner, Harry Stinson, called to the guest to "Let go the jib sheet." We others were busy at something else, and Gunning did nothing, while the yacht went over to her cabin top, and Henry yelled again, "Gunning! Let go that jib sheet!"

Then the guest rose with war in his eyes: "Who's touching your damned jib sheet?" he asked, and he climbed down into the cabin.

STINSON JARVIS.

BALTIMORE YACHT CLUB AT CURTIS BAY, MD.

Baltimore, Maryland

This month finds all of the amateurs busy working on their boats endeavoring to get into commission as early as possible. From present indications the season will be an early one, and there will be more new boats, especially motor craft, than for a number of years. There will probably be some racing among the cabin class, and an effort will be made to have a long-distance race on the Chesapeake, over a course of not less than 100 miles.

Among the larger of the new boats to be put into commission will be the 70-footer Free Lance, from the yard of the Nilson Yacht Building Company, for Mr. Garnett Clark, of the Arundel Boat Club. She is equipped with a 125-horsepower Standard engine, and she is the largest and finest boat of her type ever built in this city. She will be seen in Northern waters, for Mr. Clark will cruise as far East as the Maine coast.

A boat that is being built for the New York-Bermuda race is the Alanna, which is now receiving its finishing touches at the yard of C. Durm & Son for Dr. A. H. Braecklein, fleet surgeon of the Maryland Motor Boat Club. She is 47½ feet over all, and is equipped with a 35-horsepower engine of special design.

Mr. W. G. Wimmer, of the Corinthian Yacht Club, is having built a 47-foot hunting cabin cruiser in which he will have a 25-horsepower Standard engine. The same firm is turning out a 36-foot raised-deck cruiser for a Mr. Lee, of Harford County, Md., which will have a 20-horsepower Mianus engine. The company is also lengthening the power boat Alverado from 50 feet to 65 feet, and it is building a 47-footer for stock.

Mr. E. J. Little is having built a 40-footer of the raised-deck type, and Mr. Raymond Thompson is building a 22-foot speed boat that will have a 10-horsepower engine. Commodore Myer Rosenbush, of the Maryland Motor Boat Club, is having a new 25-horsepower, heavy-duty Buffalo engine installed in the Edith R., to take the place of a smaller engine. Mr. Henry Hulseman, of the Baltimore Yacht Club, is having an 8-horsepower engine installed in his auxiliary yawl Wye, displacing a smaller engine.

Marine engine agents report many sales throughout the tidewater counties during the past month, and all declare that the outlook for business is better than it has been for a number of years. Among those who have purchased is Mr. A. R. Larrimore, who will install a 10-horsepower Gray engine in a 50-foot bugeye. Mr. Charles H. Priest, well known to local motor boatmen, is now the representative of the Fairbanks Company.

The Maryland Motor Boat Club will be the first of local organizations to go into commission, May 14 having been set for the day. The Corinthian Yacht Club and the Baltimore Yacht Club will go in during the latter part of May, and the Baltimore Motor Yacht Club on May 30.

S. S. SCOTT.

Atlantic City, N. J.

VENTNOR YACHT AND MOTOR BOAT CLUB

We are all shipshape and ready for the Havana race. Expect to enter two boats in this big event, either one of which has a chance to bring home the bacon. In fact, Vice-Commodore Brigham, owner of one of the new boats, has already invited the club, and the Ventnor yachting colony in general, to come around after it's all over and drink a health with him from the brim of the handsome cup offered as first prize.

The Calif, as the new boat is to be christened, is nearing completion. She is 60 feet on deck, 11 feet 6 inches beam, and 3 feet 6 inches draft. She will have a plum stem with a racking Norman V stern. With considerable deadrise aft and sharp lines forward she will have no trouble in a heavy sea. The under-water displacement in the bows has been kept full enough to prevent her from burying. Aft there will be a 12-foot flush deck instead of the cockpit. On the raised deck forward will be a trunk cabin extending well aft. Over engine room will be the bridge, with steering gears and engine controls. Powerful engines will give her an average of 15 miles.

This boat has been built specially to clean up the fleet in the Havana race, and the club looks forward with the keenest pleasure to her success.

SEASIDE YACHT CLUB

The racing schedule for the season so near at hand has expanded in all sorts of directions since we were last in print, the latest announcement being the race from Atlantic City to the Atlantic Yacht Club, of Brooklyn, N. Y., which will closely follow the return race from Havana. The Brooklyn club offers a cup worth several hundred dollars to the winner of this third link in the great Havana race, and it's safe to say there will be something doing along these shores after May 21, when craft of every description from all the yacht clubs from Maine to Florida will be congregated in these waters overhauling, trying out and sailing over the course in preparation for the week of sport following the finish of the race from Havana.

To date the hustling committee have outlined the racing as follows: May 21, the cabin cruisers will be sent away on the race from Philadelphia to Havana. The racers will be accompanied down the Delaware as far as Cape May by a large fleet from the Philadelphia Yacht Club, after which they will go forward to Havana, while their escorts will come to Atlantic City to await their return. After finishing off the Havana Yacht Club, the skippers, their friends and crews will enjoy a brief rest on shore and much

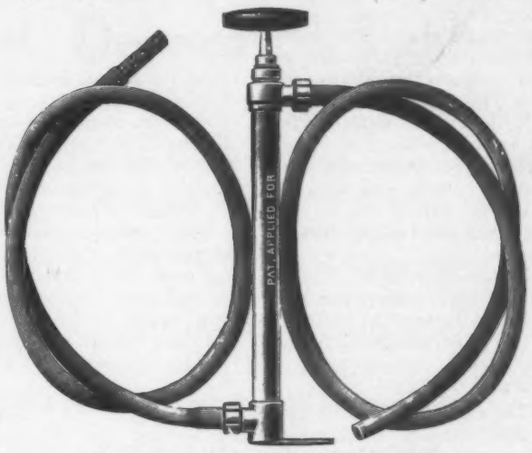
SOME DURKEE SPECIALTIES

FOR YOUR MOTOR BOAT

The New Durkee Bilge Pump

(*Patent Pending*)

is a distinct improvement over the other kind which looks so much like it. The length of hose which serves as an intake allows the footrest of the pump being placed on a locker, seat or deck, which means that the operator is not obliged to put a twist in his back to clean out every drop of bilge water. For washing decks and cleaning off an anchor on moderate-sized craft, the ease by which the intake hose may be dropped overboard while the operator is standing on the deck is a mighty taking feature.



THE NEW DURKEE BILGE PUMP

The Durkee Wheel Control

The Durkee Wheel Control gives one person complete control of the boat, just as a similar method gives the driver complete control of an automobile.

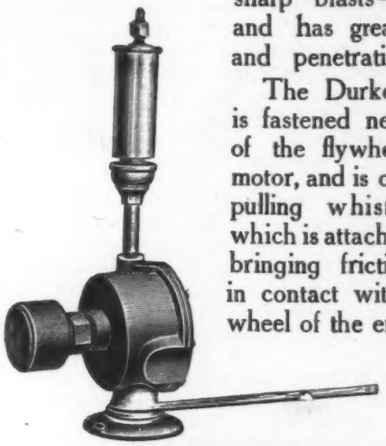
The spark and throttle levers are situated within the rim of the steering wheel.

This method of control is the most satisfactory way of keeping in the hands of one person the operation of a motor boat.

The Durkee Power Whistle

gives a long, continuous blast or a series of short, sharp blasts—at will—and has great distance and penetrating power.

The Durkee Whistle is fastened near the rim of the flywheel of the motor, and is operated by pulling whistle rope, which is attached to lever, bringing friction wheel in contact with the flywheel of the engine.



THE DURKEE PATENT THIEF-PROOF DECK PLATE

The Durkee Patent Thief-Proof Deck Plate

There are two ways to open it—by a key or a jimmy. The fellow who steals gasoline can't follow this calling if you have one of these Deck Covers. You have the key. He may have a jimmy, but to work a jimmy makes a lot of noise.

The Durkee Patent Keyless Deck and Hand Hole Plate

THE DURKEE PATENT KEYLESS DECK and HAND HOLE PLATE

The Cap of this Plate may be inserted without the use of a key of any kind. Instead of a thread to hold it in place, a couple of springs, actuated by studs in the flange of the cap, fit into a groove in the plate, and it may be inserted or removed instantly. This plate, in the 4-inch size, makes a particularly good hand-hole plate for covering the supply valve at the gasoline tank, which in many open craft can be approached only by removing the portable bulkhead.

C. D. DURKEE & CO., 2 South St., New York

feteing at the hands of the Cuban officials. On or about the tenth day of June the return race will be begun, and it is expected will finish off this club about June 18.

And here's where the fun starts, for the next day a triangular race over a course of 120 miles will be run from Absecom Inlet to Whistling Buoy, south to Cape Henlopen, to the McCrae Shoals off Cape May, and return to finish line off one of the ocean piers.

Although the race will be sailed under the management of the Yachtsmen's Club, of Philadelphia, and the Seaside Yacht Club, it will be, of course, open to any boat of any recognized yacht club along the Atlantic Coast.

During this strenuous week the hotels and yacht clubs of this section will be thrown open to the entertainment of the visiting yachtsmen and their friends. The beach front hotels will rival each other in offering cups and individual prizes for the triangular race. The city will take official notice of the event by handing over its keys to the visitors and the yacht owners. This carnival of racing will surpass anything else in the history of the sport, and with its passing the spark will be put to the engines of the cabin cruisers again, and they'll start off on the race to New York and the Atlantic Yacht Club, where more prizes will be waiting for the winners, and undoubtedly almost the entire fleet in the vicinity at this time will move on to New York with them.

For all this we've got a committee acting with our Philadelphia brothers which can't be beat. It is composed of E. A. Parker, Commodore J. H. Lippincott, H. E. Cook, William Manpay, Isaac Bacarach, Charles D. White, Col. Walter E. Edge, Thomas Bowes, T. T. Cain and A. C. Adams.

OCEAN CITY YACHT CLUB

Ready for anything afloat! "That's us!" The Ocean City Motor Boat Club now numbers about eighty-seven—*"paid up!"*

You see we had to do it. Had so many races on the card last season that it was sometimes impossible to run them all off on one day, so the knights of gasolene were separated from the sand bag slingers, and we're going to build them a club house of their own. Plans for the new building are already nearly completed, and we expect the boys to be housed by the middle of the summer.

Commodore Snow is to be congratulated on his new cabin cruiser. She has the earmarks of being the big noise in her class this season. G. A. Snook is waiting for his new model for the season of 1910. C. L. Hagy is looking for a speed boat to clean up the fleet, but he will look a long ways before he gets anything to come home ahead of the new ones now under construction. A mate has confided in me that he is coming out with a boat by Vanderslice June 1, powered with a Sterling engine developing about 90 horsepower. This means 30 miles per hour.

He didn't want me to tell the boys, but I think it is only fair that the club should be warned of the coming of this new speed fiend.

RALPH HARCOURT.

New Rochelle Yacht Club

The recent growth of the New Rochelle Yacht Club and the progress that has been made in building up the club property is deserving of commendation by all who are interested in the sport.

Commencing the season of 1908, the trustees were confronted by an indebtedness of about $4,000, a constant falling off in membership, and a somewhat run-down condition of the club properties. The most economical management was thus necessitated, and in the face of all the obstacles prevailing the debt at the end of that season was reduced to about $1,000—over $3,000 in cold, hard cash having been used up in this way. During this period the club also took its usual active part in cruising and racing, its annual regatta having had more entries than ever before in its history up to that time.

Commencing last season, the membership of the club had fallen to about 150. There was still a debt of about $1,000 and the necessity of expending considerable money for the rehabilitation of the club property and premises. At the end of the year, however, all the old debt was settled, and the club had a cash balance in its treasury approximating $500, in addition to having spent about $4,000 on repairs, improvements and upkeep of the property. Now the home on Harrison Island is "tight, staunch and strong," well painted and in good repair. The grounds have been beautified, a sea wall built, and everything is up to date and shipshape. The membership has increased to 215, and the regattas of last season broke all records as to the number of entries.

At the annual dinner of the club, held on February 5, at the Hotel Manhattan, in New York City, about 160 members and their friends were in attendance, the greatest in the history of the club. At a business meeting preceding the dinner the following officers were elected for the season of 1910:

Commodore—M. W. Houck.
Vice-Commodore—E. C. Myrick.
Rear Commodore—S. C. Hunter.

The new flag officers go in with the same enthusiasm that has attended everything in connection with the club lately. Commodore Houck's flagship is the sloop Dixie. Vice-Commodore Myrick is about to replace his sloop Onda with a new boat, and Rear Commodore Hunter is looking out for a substitute for the Juanita. A gun club has been formed, and trap shooting contests are held weekly, pending the active opening of the yachting season. It is planned to hold many entertainments in addition to the regular cruises and regattas. As already stated, the membership of the club is now 215, and an article in the constitution provides that when the aggregate is 250 none but boat owners shall be admitted.

Bayonne Yacht Club

At the annual meeting of the Bayonne Yacht Club, of Bayonne, N. J., held on January 15, the following officers were elected: Commodore, Henry W. Pratt; vice-commodore, Frank W. Peppel; measurer, William K. Dodd; secretary, William V. Collins; treasurer, Arthur J. Shadek; director, Charles J. Metting; membership committee, Charles Nenninger, Charles A. Steller, Frank Schneider; race committee, Fred. U. Whitaker, F. William Vette, Armond G. Rossig.

Some new boats will be added to the fleet this year, among them being a 26-foot cabin cruising launch, Commodore Pratt, owner; a 28-foot cruising yawl, Vice-Commodore Peppel and Charles Nenninger, owners, and a 40-foot power cruiser owned by Charles A. Steller. Construction has also been begun on three additional boats for the club's racing class of small catboats. Races in this class did not get under way last season because of the non-completion of some of the boats.

Stamford Yacht Club

The following officers of the Stamford Yacht Club were elected at the annual meeting February 1: Commodore, Richard H. Gillespie; vice-commodore, George C. Blickensderfer; rear commodore, Jas. S. Jenkins; secretary, Herbert Lawton; treasurer, Herbert Lawton; fleet surgeon, Dr. J. Howard Staub; measurer, Harry S. Hart; chaplain, Rev. Charles J. Ryder. Directors, Walter C. Allen, Edward Corning, Harry S. Hart, Bartholomew Jacob, William H. Martin, Frederic G. Mather, John B. Phillips, John J. Radley, Herbert C. Reed, Henry G. Ridabock, Frank Shea, Charles F. Waterbury.

Hudson-Fulton Yacht Club

The Hudson-Fulton Yacht Club, though not six months old, has already a membership of over 200 men, and bids fair to become a most powerful factor in the club life of the upper West Side. Plans are under way for the acquisition of a site on the North River near 110th Street, and the erection of a unique and commodious club house.

Inquiries from motor boat owners and others interested in yachting are coming in rapidly, and the board of governors looks towards the future of the club with great hopes.

At the informal smoker and entertainment held Friday evening, March 11, the temporary headquarters of the club, at No. 2789 Broadway, were crowded with an enthusiastic gathering of members and friends.

The officers of the new club are the following: Commodore, Clarence G. Backus; vice-commodore, Francis Holley; rear commodore, A. H. MacRae; secretary, C. B. King; treasurer, O. R. W. Hoefer; assistant treasurer, W. S. Chapman; fleet captain, Charles F. Thiele; fleet surgeon, Dr. S. K. Foote; fleet chaplins, the Rev. A. E. Keigwin and the Rev. J. R. Roach; measurer, William Murphy; sergeant-at-arms, J. A. Lange; librarian, H. T. S. Ellison; board of governors, Charles A. Gould, F. A. Brooks, Conrad Milliken, L. A. Servatious, Thomas Quigley, Corbett McCarthy, R. L. Thomas, H. L. Warren and A. W. Firth.

McKeesport Launch Club

The annual regatta of the McKeesport Launch Club will be held during the "Old Home Week" celebration of the city of the same name, July 4 to 9, inclusive. Events open to all. Classes for racers, cruisers and family boats.

An effort to hold a free boat, engine, and accessory show will be made, providing a suitable building can be procured.

No charge for entrance fee for any events, or space for exhibits will be made. The idea of the club is to hold the show to give boatmen a chance to see and meet the builders and the goods face to face without going to some of the distant towns where shows will be held this year.

The following officers were elected for the year: Ross L. Thayer, commodore; Dr. L. D. Davis, vice-commodore; Charles Clintner, rear commodore; F. A. Decker, purser; W. R. Lansford, corresponding secretary; Chris Markus, fleet captain; Dr. H. S. Arthur, chairman house committee; Dewain King, chairman regatta committee; Geo. Green, chairman membership committee.

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The production of China, Glass and Silver Services bearing the yacht owner's monogram, club insignia, private signal or colors is a Higgins & Seiter specialty. ¶ Designs of distinctively original, artistic character and wares of the most dependable qualities constitute an attraction which has drawn to us the patronage of the finest yachts afloat. ¶ We will submit a specimen plate or goblet decorated with any design, free of charge and entailing no obligation to buy.

Our beautiful booklet "Under the Ensign," containing full particulars, and list of yachts carrying Higgins & Seiter Table Services, sent on request,

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"Painting, Sir, I have heard is a mystery."
—*Measure for Measure.*

A mystery to the layman, not to us.
Did you have trouble with your paint last season?
Did your varnish turn white, blister or disappear?
Our Marine department will tell you the cause.
Why not ask them? That's what we have this department for.

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Makers of

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The Long Life Spar Varnish

COLUMBIA YACHT WHITE

The Perfect White

And other Standards of Quality in Marine Paints and Varnishes

101 FULTON STREET, - - NEW YORK

FOUNDED 1754

Of Interest to the Skipper

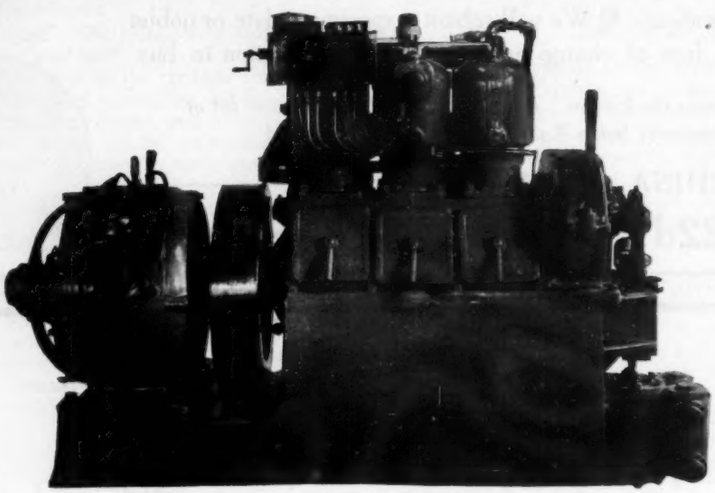
Gasolene Combination Auxiliary and Generating Set This is a recent addition to the "speedway" line of the Gas Engine & Power Company and Charles L. Seabury & Co., Con., of Morris Heights, New York City, and is designed especially for use aboard large gas power yachts to drive a generator for lighting purposes; an air compressor, to store air for starting and reversing air-reverse gas engines, and a plunger pump for fire and bilge service. By omitting the air compressor a larger generator can be used if required, making a suitable plant for steam yacht installation.

The engine consists of three vertical cylinders, 4½-inch bore by 5-inch stroke, mounted on a cast-iron closed frame, which in turn is bolted to a bed with extension cast on for a 3-kilowatt generator. The two end cylinders are power cylinders, while the center one is an air compressor with mechanically-operated intake valve. This valve is arranged to be lifted from its seat by means of a hand lever, relieving the cylinder from duty when compressed air is not required.

On the end opposite the generator, attached to the base plate, is the double-acting bilge pump, 4-inch bore by 4-inch stroke. The axis of the pump cylinder is vertical, so that plunger and valves work vertically, making the best possible conditions. The pump is driven from the crankshaft through a train of spur gears at about one-eighth engine speed; one of the gears in the train can be shifted in and out of the mesh, so that the pump can be stopped or started while engine is running. The pump body, leads, valves, plugs, etc., are bronze throughout, and it is suitable for all the numerous pumping requirements on ship board.

Two ignition systems are supplied; the jump-spark with timer on vertical shaft and Bosch magnetic plugs and magneto. Machines can be furnished with either or both systems.

Oil for main bearings and cylinders is supplied from a forced feed lubricator. The crank boxes are fitted with scoops, which dip in oil carried in the crank case, the level of which is kept constant by an overflow. The normal speed of the engine, when running the generator, is 800 revolutions per minute, speed regulation being secured by a weighted governor, acting on a butterfly throttle in the gas intake pipe and heavy fly-wheel interposed between engine and generator. Cooling water is supplied by a plunger pump eccentric, driven from the end of the cam shaft. The water, after passing through cylinder jackets, enters the water-cooled exhaust manifold.



Speedway Combination Generating and Compressor Plant.

Material and workmanship are of the highest class throughout; cylinders, pistons, piston rings and wrist pins are ground; cams, cam rolls, pins and all parts subject to excessive wear or shock are hardened.

Dimensions of floor space occupied are 61 inches long, 20 inches wide, 40 inches high; weight, with 3-kilowatt generator, 1,575 pounds.

A very handsome 68-foot over-all twin screw cruising motor boat is in course of construction at the works of the Gas Engine & Power Company and Charles L. Seabury & Co., Con., Morris Heights, New York City, for Mr. A. Gardiner Cooper, of New York. This craft is of the 'midship deck type. There is a stateroom arranged for owner in the forward deckhouse. Under the 'midship deck the engines are located, also the crew's quarters. In the after cabin there are two folding berths at the forward end, while two fixed berths are at the after end. Galley, owner's toilet, buffets, etc., are all conveniently located. There will be two four-cylinder "Speedway" gasolene engines of 32 to 40 horsepower each installed, and 12 miles per hour has been guaranteed. The hull is completed, joiner work is ready to set up, engines about ready to install, and, in fact, the work is progressing very rapidly. The name of this yacht will be the Manchonac. She is a very attractive and seaworthy looking craft, and when completed will be a notable addition to the fleet of the Indian Harbor Yacht Club, of which Mr. Cooper is a member.

The new 115-foot, twin-screw, steel gasolene yacht building for Messrs. Eisenlohr Bros., of Philadelphia, is progressing very rapidly. This boat will be named Miramar. The new 140-foot, twin-screw, high-speed steam yacht is coming along very rapidly.

The 40-foot cabin launch built for William H. Rankin, of Elizabeth, N. J., was completed and delivered, and is now in service in Florida waters. A six-cylinder "Speedway" engine was installed, and 13 miles per hour was attained. The name of this boat is Wilkin.

The new 40-foot cabin motor boat for Mr. Chas. A. Schieren, for service on the Great South Bay, is about completed, and is almost ready for delivery. A four-cylinder, 32 to 40-horsepower "Speedway" engine is installed, and 13 miles per hour has been guaranteed. She will be named Lorelei II.

The 31-foot launch for Mr. James Craig, Jr., from Cary Smith & Ferris' design, is completed.

Contract for 110-foot twin-screw steel motor yacht, from Cary Smith & Ferris' designs, is under course of construction at the Seabury yards. The 30-foot motor boat for Mr. A. L. Bernheimer is ready for delivery. The 31-foot mahogany speed launch for Mr. George McKesson is about completed. A 20-foot launch with a "Speedway" engine is being built for Mr. O. H. Carrington, of New York.

Two new four-cylinder, 18 to 22-horsepower each, "Speedway" motors are being installed in Mr. J. S. Foster's cabin launch Comfort I. A four-cylinder, 18 to 22-horsepower "Speedway" engine has been shipped to Haktor Walvatne, Sunde, Norway.

A 60-foot open motor boat, with a guaranteed speed of 36 miles per hour, is being built for a member of the New York Yacht Club. This is the fifth "Speedway" motor boat that he has owned.

A 21-foot gasolene launch was recently shipped to steam yacht Cavalier at Balboa, and was equipped with an 8 to 10-horsepower "Speedway" engine. A six-cylinder, 125-horsepower (special) "Speedway" engine has been ordered by the Matthews Boat Company for a 50-foot speed launch that they are building on order.

The 50-foot raised-deck cruiser for Mr. T. M. Russel, of Middletown, Conn., is planked. This boat has a beam of 11 feet, and will be fitted with a six-cylinder, 50 to 60-horsepower "Speedway" engine. A speed of 12 to 13 miles per hour has been guaranteed.

A 35-foot steel motor boat, 7½ feet beam, to be equipped with a four-cylinder, 32 to 40-horsepower "Speedway" engine, is under construction for the Orville Dredging Company, Ltd., Orville, Cal.

A very handsome 36-foot motor boat, 6½ feet beam, to be equipped with a six-cylinder, 32-horsepower "Speedway" motor, has been ordered by Mr. William Mitchell, of New York, for service on Lake George. A speed of 14 to 15 miles per hour has been guaranteed.

A 45-foot open motor boat, fitted with a six-cylinder, 60-horsepower "Speedway" engine, is under construction for Col. John Jacob Astor; 20 miles per hour has been guaranteed. This boat is an exact duplicate of the 45-footer exhibited at the recent Motor Boat Show in Madison Square Garden, and which was sold to Commodore T. M. Turner. A new 20-foot yacht tender, with a "Speedway" motor, has been ordered for the steam yacht Cherokee, owned by Mrs. John S. Kennedy.

A steel gasolene tug, 50 feet long, 10½ feet beam, is under course of construction for Mr. F. B. Chesbrough, Boston, Mass. A six-cylinder, 80 to 100-horsepower "Speedway" will be installed.

A 50-foot open gasolene motor boat, 6 feet 6 inches beam, is being constructed for a well-known New York party. This boat will be fitted with a six-cylinder, 125-horsepower "Speedway" motor, and a speed of 25 miles per hour has been guaranteed.

A 20-foot motor boat, of the runabout type, has been sold to Mr. Fred erick D. Shear, of New York.

The 42-foot raised-deck cruiser which was on exhibition at the recent Motor Boat Show, and which was so favorably commented on, is owned by Mr. George C. Campbell, of New York, and has been named Vagabond. This boat will go in commission early in April, and will be used for a month or two in this vicinity, after which the owner contemplates a cruise to Lake Champlain and the Thousand Islands.

The new 28-foot mahogany gasolene launch built for the auxiliary yacht

Give Your Boat a Surprise

Rip off all the old dingy rope;
put on the smooth and brilliant

Columbian Yacht Rope

Every boat needs **Columbian** Yacht Rope as much as it needs a coat of paint. It improves the appearance as much, too.

Columbian Yacht Rope is made only for those yachtsmen who take pride in the appearance of their craft. If you do not care how your boat looks, you are not interested in **Columbian** Yacht Rope. If you **want** your boat to be as smartly rigged as the next, you need this rope. Have your outfitter order some right away, because later in the Spring the demand will exceed the supply.

No rope can be "just as good," because **Columbian** is the standard for cordage buyers. Our agents throughout the country will see that you are supplied. Write for name of nearest one.

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SPECIAL NOTICE!

OUR 500-Page! 1910 Catalog is now ready for distribution. It contains not only all the new goods, but also valuable chapters on "The Modern Gasolene Engine," and "Practical Sailing for The Amateur," written by recognized authorities. On receipt of 18 cents postage we will forward promptly and credit this amount on your first order.

GEO. B. CARPENTER & CO., 200, 202, 204, 206, 208 South Water Street, CHICAGO

Genesee, James S. Watson has been tried out, and a speed of 15½ miles per hour was attained. A four-cylinder "Speedway" engine is installed. Fourteen miles per hour was the speed guaranteed.

In Case of Fire It is unnecessary to advise any yachtsman or power boat owner that protection against fire should be both complete and thoroughly dependable. It is difficult to imagine a more heartbreaking situation than to find, after discovering a blaze aboard the boat or in the club house, that the water buckets are empty, the fire extinguishers out of order, or that the hand grenades are not in their accustomed places. The Rapid Fire Extinguisher Company, of New York, seems to have inaugurated a service that comes as near entire dependability and effectiveness as it is possible to arrive at. In the first place, the "Rapid Safety" is marvelously effective. It will put out any and every sort of fire, whether resulting from gasolene, benzine, kerosene, lubricating oils or turpentine. It is effective at a distance of 50 feet, thus making it unnecessary to approach the flames closely. It plays a continuous stream of carbonic acid gas until the contents are exhausted, one extinguisher doing the work of 300 buckets of water. Perhaps more important than all this, however, is the fact that the *dependability* of the extinguisher is assured at all times. It is not *sold* to users, but *leased*, at a small monthly rental and in any number—from five to one thousand. Each extinguisher installed is carefully inspected once every three months by representatives of the company, and after use, in the event of fire, the company, upon notification, at once recharges it, with no trouble, expense or responsibility to the lessee beyond the stipulated monthly rental. Having proved its effectiveness under the severest tests, time and again, the rapid safety service seems well entitled to the careful consideration of every one who has property to protect.

The Rapid Safety Fire Extinguisher

Buffalos in Great Demand Mr. W. F. Harris, the millionaire motor boat owner of Palm Beach and New York, is making ambitious and thorough plans to capture first honors in the chief American and Canadian racing events of the coming season. He aspires to be one of the victorious defenders of the British International Trophy against the British challengers. To this end he has procured the latest production of the Buffalo line of marine engines—one of the new 225-horsepower, eight-cylinder "on V" type Buffalo speed engines for a new 40-foot race boat now being built for him. Mr. Harris is at present the owner of the champion racing boat of Canada. Besides this he owns two other speed boats—a day cruiser and a deep-sea cruising yacht. With his new 40-footer, powered with the 225-horsepower "on V" Buffalo, Mr. Harris has signified his intention of entering the Thousand Islands Gold Cup races, the Canadian championships, the elimination trials for the British International Cup, the Hudson River races, the M. V. P. B. A. regatta at Peoria, the Inter-Lake Association races, and as many other speed contests as he can possibly cover with one boat in one season.

Dr. Virgil C. Reynolds, of Ceiba, has purchased a six-cylinder, 54-horsepower heavy-duty Buffalo for his new 50-foot cruiser.

The Herreshoff Manufacturing Company has purchased a four-cylinder, 36-horsepower heavy-duty Buffalo for use in a work boat at its boat-building plant.

Charles S. Taylor, of 160 Portland Street, Boston, Mass., has purchased a 25-horsepower Buffalo speed engine of the auto-marine type for his new 30-foot speed boat.

George Drewry, of Kenora, Ont., has purchased one of the new 25-horsepower Auto-Marine Buffalo speed engines for a new boat now building.

The United States Government has purchased two 12-horsepower Buffalo engines of the heavy-duty type for the use of the Lake Survey Office at Detroit, Mich.

H. J. Lamb, of London, Ont., district engineer of the Dominion Department of Public Works, has purchased a 20-horsepower Buffalo for his boat Nokomas.

B. P. Everitt, of Detroit, Mich., is installing a six-cylinder, 100-horsepower Buffalo in his new 75-foot cruiser yacht. As an added equipment to his yacht, Mr. Metzger has purchased a 3-horsepower Buffalo combination electric lighting and pumping outfit.

E. Linnell, Franklin, Tasmania, has purchased a two-cylinder, 5-horsepower Buffalo, to be installed in a French-built hydroplane.

E. T. Stevens, of Brunswick, Ga., will change the power in his 50-foot cruiser Annie, taking out twin-screw 6½-horsepower engines and installing a four-cylinder, 24-horsepower Buffalo of the heavy-duty type.

A New Power Bilge Pump W. & J. Tiebout, 118 Chambers Street, New York, have brought out, just in time for installation in boats now outfitting, their Star Bilge Pump No. 60 and 62. Two points of this pumping plant which will recommend it to the experienced boat owner are its economy of space and the ease with which it is thrown into or out of operation without stopping the engine. As will be noted by the illustration herewith, a cam, attached to the propeller shaft, operates the plunger of the pump, and by a few inches movement of a small lever the plunger is brought into contact with or kept from contact with the cam. The cam is split, and the boxes are hinged so that it may be attached to the shaft without uncoupling the latter.

Oil cups, with wicks, are provided, and these are of sufficient dimensions to allow the smooth and easy running of the pump with infrequent replenishing of the oil supply.

The check valves are so arranged as to be easily accessible for examination when desired, and facilities are provided for the rigid installation of the pump. The pump is made either with iron body and brass cylinder and plunger, or entirely of brass. The dimensions of the pump are 1-inch bore by 1½-inch stroke, and it will throw water at the rate of 2 gallons per minute for each 500 revolutions of the shaft during that time. It will fit any sized shaft from ⅝ up to 1½ inches in diameter, and requires but 3½ inches of space on the shaft.

A Marine Copper Paint Walker's Marine Copper Paint is made under a patented process, and is entirely different in character and composition from other paints. It gives a smooth, copper racing surface which it is claimed keeps off barnacles and grass. Besides its covering properties the medium enters the pores of the wood, rendering it impervious to worms and decay germs.

Owing to the unusual composition each additional coat unites with previous ones, making a hard, uniform surface which will not crack, blister or peel. Burning or scraping off is thus rendered unnecessary, and this feature will appeal to the experienced as a distinct advantage, because it prevents delay in drydock and saves time and expense in overhauling.

While the first cost is slightly greater, this paint is economical to use, because it is practically indestructible, and a washing to remove any scum accumulation takes the place of a mid-season coat.

More Speed with Same Power There never yet was a motor boat owner who did not want to get through the water in his boat as quickly as possible. If that were not the case, nine-tenths of us wouldn't be reading engine catalogues each year and considering the advisability of swopping propeller wheels. The fellow who has a slow boat wants to make it a moderately fast one, and the fellow who has a fast boat wants to go faster still.

Now, one of the great drawbacks to getting the best there is out of hull and engine is the water that is slopping around in the bilge, and the more of it there is, the more superfluous weight there is aboard to detract from the speed.

Incidentally, there are few things that detract more from the comfort of motor boats than when they are wet and sloppy underneath the floor boards. The mere knowledge of this is bad enough, but it is infinitely worse when the matter is brought to one's attention forcibly by its getting up to the bottom of the fly-wheel, allowing the engine to start a miniature shower bath on its own account.

And one of the great troubles that confronts the speed boat frequently is the fact that many of these lightly-built craft open somewhat below the waterline when the engine is doing its best, and the faster the boat goes the more water she takes through the openings.

The Hitchcock Automatic Bilge Bailer was invented by a man who had been up against the wet-boat proposition good and hard. As a result he evolved the Automatic Bilge Bailer, a little implement that the owner can adjust himself to the bottom of his boat, and

Tiebouts New Power Bilge Pump, which may be installed without uncoupling shaft, and which can be thrown into operation or stopped while engine is running.

American Made Sails Lead the World

Some of the Yachts for which we have made sails:

Schooners		Sloops	
Visitor II	Emerald	Joyette	Little Haste
Alcyone	Hesper	Ellen	Neola
Intrepid	Corona	Timandra	Cherry Circle
Arbella	Elmina II	Wianno	Spirit II
Shiyessa IV	Ariadne	Athene	Eleanor
Dervish	Resolute	Weetamoe	Dorothy Q
Constellation	Vergemere	Winsome	Little Rhody II
Chanticleer	Constance	Sally X	Odysseus II
Cygnet	Savarona	Crooner	Eelin
Mavis	Valmore	Skeezix	Mimosa II
Merlin	Invincible	Lady	Tyro
Katrina	Taormina	Onda II	Dorello
Quissetta		Nutmeg	Marchioness
		Meemer	

Yawls		Steam Yachts	
Comanche	Wayfarer	Machigonne	Lyndonia

Look at the Ellen. The whole outfit is the product of American manufacture—the canvas is made in Lowell—the rigging and blocks in Boston—the whole outfit is the product of home manufacture. We call attention to these facts because we do not think it necessary to import either goods or workmanship with which to win.

WILSON & SILSBY

ROWE'S WHARF, BOSTON, MASS.

Our Cable Address is "WILSAILS," BOSTON, W. U. C. C.

the ROPER Safety Propeller

The ONLY Guarantee of Perfect Speed Control to the Motor Boat. Obtains all the flexibility, ease, and range of control of the steam driven boat for the boat using an internal combustion motor. Maximum power of motor always instantly available. Quick, easy power to pick up speed. No multi-lever controls once engine is started. One easy throw of reverse lever gives any speed in either direction without hitch, jerk or jar.

MEETS EVERY DEMAND OF THE MOTOR BOATMAN

Brings the boat to Full Stop in half the time required by other reversing devices. Sends it from Full Speed Ahead to Full Speed Astern in less time than it takes to adjust throttle and spark by the old three lever method. Prevents drifting, holds boat motionless against wind and tide. Gives range of speed for every emergency.

BOW CONTROL for use where control is desired alongside, back or forward of motor. Acts exactly similar to ordinary equipment. Strong, dependable, durable.

Write for details of Roper Safety Propeller Equipment. Send for catalog and tables.

C. F. ROPER & COMPANY, HOPEDALE, MASS.

which is so simply constructed that it is a wonder it was never thought of before.

It will never get out of order. It will not take up a particle of room. It is automatic in its action. The minute you start the engine the Hitchcock Bilge Bailer starts in on its mission of expelling every bit of bilge water that is in the boat. It does this without requiring any extra power from the engine.

There is no necessity of altering of hull. You never have to pay any attention to it or look at it. It is always at work when you are underway. The minute your boat slows down, or you come to anchor, the Automatic Bilge Bailer closes itself. This device, while of incalculable value to the owner of a motor boat, can be bought for an insignificant sum.

It is sold by all dealers in marine hardware or direct from the manufacturers. The Automatic Bilge Bailer Company, 150 Huntington Avenue, Boston, Mass., are the makers, and will tell you all about it if you will mention YACHTING when writing, and mention draft and speed of your boat.

A New Design of Two-Cycle Engine

The Vim Motor Manufacturing Company, of Sandusky, Ohio, made a great hit at the New York Show with their new design of two-stroke motor, which the makers claim eliminates the objectionable features of high-speed motors.

This new motor, it is claimed, will deliver from 25 to 50 per cent greater horsepower than any other motor of the same bore and stroke. The feature of the new extreme high-speed motor is a combination of double carburetion and fuel intake system with a double intake port, in which the secondary ports are greater in area than the primary. A patent has been applied for on this device, which is claimed to be the greatest advance made in two-stroke engine construction in recent years. The application of the new principle does not necessitate any additional working parts; in fact, the new extreme high-speed Vim is just as simple mechanically as the regular line of Vim motors.

In the new extreme high-speed Vim motor the difficulty has been overcome by an additional port, double fuel pipe and double carburetor system, which allows the base to fill with fuel mixture at high speeds up to 1,300 or 1,400 revolutions per minute, with a corresponding increase in horsepower.

Tests, we are told, made by disinterested parties showed an average of 16.4 horsepower at an average of 1,268 revolutions per minute, with a two-cylinder, 4-inch bore, 4-inch stroke motor; a gain of over 50 per cent in power at high speed.

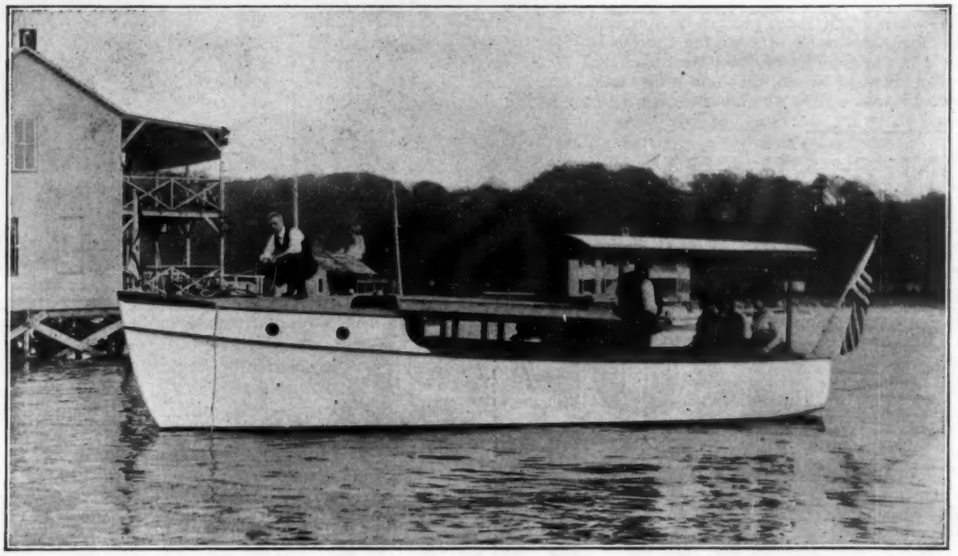
The Vim extreme high-speed motors are made for hard service, such as is required for racing boats, and the manufacturers will gladly send their new illustrated catalogue, fully describing the new and their regular line of motors, to readers of YACHTING.

A Staunch Little Cruiser

We illustrate herewith Lida M., whose plans appeared in YACHTING for April, 1909, a remarkably comfortable and shipshape little cruiser, designed and built by the Tarrytown Boat Works, of Tarrytown, N. Y. She is 30 feet in length over all, 7½ feet beam, and her greatest draft is 30 inches. She has a "V"-shaped stern, a moderately raking straight bow, and her cabin is a combination of the raised-deck and trunk types.

In the extreme bow there is a 60-gallon gasolene tank, separated by a watertight bulkhead from the forward cabin or stateroom. This latter is 6 feet 3 inches in length, with extension transoms on each side. The floor of this forward cabin is 6 inches higher than that of the after cabin, and the two compartments are separated by a curtain. The after cabin is a combination of saloon, galley and engine room, and is 9 feet in length. On the port side is a transom 6 feet 3 inches in length, which, by extension, may be converted into a berth. On the other side is a shorter transom, which may be converted into another berth by raising up the companion steps and sliding in a couple of extension boards. The cabin is finished in mahogany and white enamel.

Just aft of the port transom is room for a two-burner kerosene or alcohol stove and a dish locker. Underneath both stove and locker is the ice-box. The engine is a three-cylinder, 15-horsepower motor, and is partly in the after cabin and partly underneath the raised hatch, which projects into the cockpit. The fly-wheel of the engine is flush with the forward end of the companion steps, which are on the starboard side of the after cabin bulkhead. She has a 7-foot 9-inch cockpit, square at the after end, with a three-bladed bronze propeller of 20 inches diameter and 24 inches pitch, and, with her engines developing 15 horsepower at 850 revolutions, she will make a speed of 12 to 14 miles per hour.



Lida M, a 30-foot cruiser built by the Tarrytown Boat Works.

American Designers Receive Order for Yacht to be Raced Abroad

Messrs. Cox & Stevens have recently been commissioned by Dr. Lennart Peterson, of Helsingfors, Finland, to design for him a sloop to race in the 5-metre class, the principal racing in this class being at St. Petersburg, Stockholm and Helsingfors. The boat will be equipped with American-made sails, but will be built in Finland, the designs having been forwarded to the owner.

The particulars of this boat show that she is quite similar in size to the Jewel Class, also designed by Messrs. Cox & Stevens last year, and which proved very popular on the Sound last summer. The new boat is slightly smaller, her dimensions being: length over all, 30 feet; waterline, 18 feet 3 inches; beam, 6 feet 6 inches, and draft, 4 feet 7 inches. Her sail area is 410 square feet. A careful comparison of the Jewel Class and this new boat shows that the latter has proportionately slightly longer ends, and is somewhat finer in her entrance. She should prove a fast, able boat, and her performance will be noted with great interest, as she will be in competition with a large number of similar vessels by other designers.

The construction called for is of the very best throughout, her planking being of mahogany, keel and deadwood of oak, as are also the frames, the fastenings all being of copper or composition. In order to give rigidity to the deck, Tobin bronze deck straps are worked, intersecting just forward of the mast, and a large number of knees are used, properly disposed. All the deck fittings are bronze. The rigging will be of the highest grade of plough steel, and hollow spars will be used. The completed boat will be in every particular as fine a vessel as can be constructed.

An Emerson Engine for Mr. Hatch's New Boat

The Emerson Engine Company, of Alexandria, Va., have just closed with Mr. Edward Hatch, of New York City, for an eight-cylinder, 7½ by 8 Special 200-horsepower engine, to be used in Mr. Hatch's new 12-metre boat in the coming events for the Gold Challenge Cup and as a defender for the Harmsworth Cup. The engine will develop its horsepower at 800 revolutions per minute, and can be speeded to 900 revolutions per minute with a proportionate increase of energy.

It is an installation that will interest every boat owner with racing tendencies, and add a feeling of security to those who have been somewhat anxious in regard to the final destination of the Harmsworth Trophy. This Emerson engine will weigh less than 2,200 pounds, and the builders claim for it less weight and greater power than the engine of Dixie. The hull of the new boat will be built at Poughkeepsie, and nothing will be spared in her power plant in the way of expense.

Mr. Hatch, who is a prominent member of the Thousand Islands Club, has certainly shown a high degree of sportsmanship in his efforts, and both he and his boat will undoubtedly make things extremely interesting during the coming season.

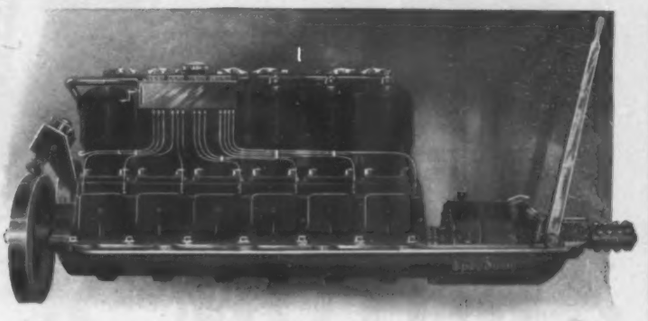
(Continued on page 358.)

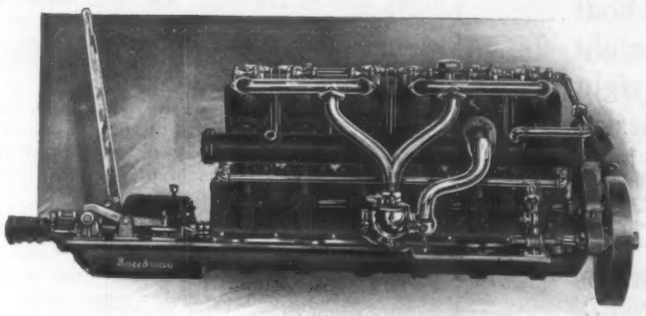
"SPEEDWAY"

Gasolene Marine Engines are designed and built for hard, steady service.

Hundreds of them in use in all parts of the world.

The New York Police Department have four "Speedway" Motor Boats, equipped with four cylinder, 50 to 60 H.P. "Speedway" engines. They have been in constant use for two years, day and night, and are always ready.





"Speedway" engines are well adapted for any class of boat, commercial or pleasure types. Let us send you testimonials from satisfied customers.

"Speedway" engines are built in sizes from 4 to 250 H.P. We carry them in stock.

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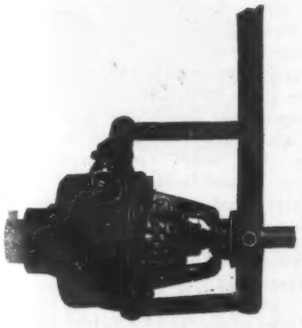
MODEL 1910



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AGENTS: J. KING & CO., Limehouse, London, England
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Indispensable for Motor Boats

You can increase the speed of a fast boat by ½ to 2 miles an hour by getting rid of the **bilge water**—no *change* in **hull** or *increase* in **power** necessary. Yours will be a *dry, safe* boat if equipped with a

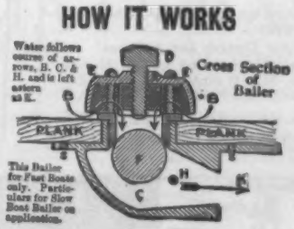
HITCHCOCK'S Automatic Bilge Bailer

It can be *quickly* and *easily* **applied.** Will be found **practical, indestructible** and **effective.** Will do the work of one man in keeping a *boat dry.* Starts **automatically** when the boat does, and is self-closing when you slow down or stop.

Price, $5.00

For sale by all dealers in marine hardware, or direct from manufacturers

HOW IT WORKS


Water follows course of arrows, B. C. & H. and is left astern as E.
Cross Section of Bailer
PLANK
PLANK
This Bailer for Fast Boats only. Particulars for Slow Boat Bailer on application.

When writing for particulars, state draft of hull and speed of boat to be equipped

THE AUTOMATIC BILGE BAILER CO.
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"How to Paint a Boat"—
A Practical Hand Book

EVERY yachtsman, motor boatman or oarsman wants to know how to paint a boat. Good boat painting is a question of right material first, and then right application of the right material. Right material is pure white lead, pure linseed oil and turpentine. Right application cannot be described so briefly.

¶ Our booklet "How to Paint a Boat" contains only a few pages, but every line helps to justify the pamphlet's title. It tells you exactly how to paint a boat. In this book we get down to specific details. The novice and the old-time boatman alike should have it. Free to every reader of "Yachting." Ask for Boat Painting Outfit No. 50 which includes some other general paint literature, as well as the above pamphlet.

Our Pure White Lead ("Dutch Boy Painter" trade mark) is now packed in steel kegs, dark gun metal finish, instead of in oak kegs as heretofore. Ask your dealer.

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16-ft. Steel Launch $96
Complete with Engine, Ready to Run

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Michigan Steel Boat Co., 1227 Jefferson Ave., Detroit, Mich., U. S. A. (30)

Of Interest to the Skipper

(Continued from page 356.)

The Emerson Engine Company advise us that they have already sold twenty-two of their 6-cylinder, 2-cycle racing engines, which weigh but 300 pounds each, and that every one of these machines will go into specially-designed hulls, building, or to be built, by various well-known builders of speed boats, and that each of these racing power plants will be run during 1910, under immediate charge of an expert racing engineer.

Atlantic Company Offers a Trophy In order to develop the type of hull most suitable to their new Revillion Light six-cylinder 30-horsepower speed engine, the Atlantic Company, of Amesbury, Mass., have made the following liberal offer:

To the boat equipped with the above engine making, during 1910, the fastest mile, $100 in gold. To the designer of the boat, a silver trophy, suitably engraved. The only conditions imposed are, that the time is to be taken at a regular club event, with the start announced as in the contest, with details of race and time certified to by the official timers of the event.

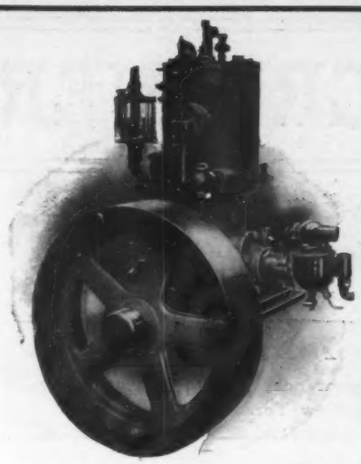
The offer is made in perfect good faith, and there are no strings attached thereto, and, in evidence of the perfect fairness of the proposition, boats owned by members of the Atlantic Company are barred from the contest.

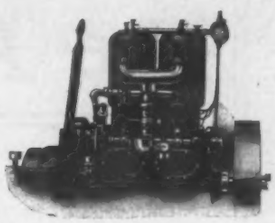
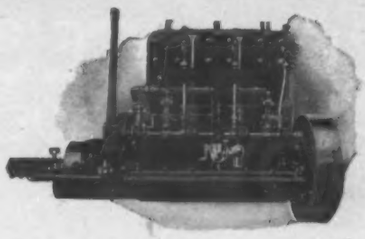
Two New Fairbanks-Morse Marine Engine Catalogues Fairbanks-Morse & Company, of Chicago, Ill., have just issued their new catalogue No. 113, which fully describes and illustrates their 1910 line of two-cycle marine engines. This catalogue is well gotten up, beautifully illustrated with many fine half-tones, printed on a high-grade enamel paper, and contains complete descriptive matter, being a very handsome and useful catalogue. For 1910 they are offering two types of two-cycle marine engines, namely, types "E" and "G." The new type "G" takes the place of their 1909 type "F," and is a marked improvement over same. It is built in sizes from 6 to 45 horsepower, is made in one, two, three, four and six cylinders, and embodies all the latest improvements—a special feature being "auto control," which makes it particularly adaptable to boats where the engine is located forward and controlled from the cockpit. The type "E" engine, 3½-horsepower and 7-horsepower single and double cylinder, is practically the same as their 1909 model, except that a few changes have been made, which add greatly to its appearance and efficiency. The beautiful finish, easy accessibility of parts, easy starting, high-grade material and workmanship and efficient oiling system are some of the strong points of their 1910 line of two-cycle marine engines.

The four-cycle, heavy-duty Fairbanks-Morse marine engines are fully described and illustrated in catalogue No. 112B, which is very attractive, and which contains complete information covering this line. These engines are already well known and hold an enviable reputation for reliability and service. They are built in sizes from 20 to 100 horsepower.

Now Occupying Larger Quarters The Sterling Engine Company, Buffalo, N. Y., announces the removal of their New York agent, H. L. Edge, from 136 Liberty Street to 141 Liberty Street, New York City. The inceasing popularity of the Sterling and the resulting increase in business necessitated larger and better quarters.

The new location will permit a larger stock of Sterling engines to be carried, and they will be shown to anyone wishing to call.



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Fifteen Years of Successful Building

Over 40,000 Running. No Freak Ideas. No Over Rating. A Good Honest Motor.
1½ to 30 Horsepower. Two and 4 Cycle Types. 1, 2, 3 and 4 Cylinder. Jump Spark and Snap Spark.

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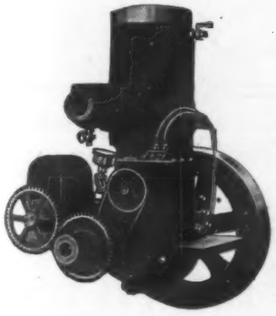
No Battery **No Spark Coil**



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Medium Weight—Moderate Speed
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Sizes 3 H. P. to 15 H. P.

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Whether your boat is large or small, if it is a good boat you want it to carry a good range, and you know exactly where to find a Shipmate.

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Established 1830 STAMFORD, CONN.

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RAPID-SHAVE
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The Powder that Shortens the Shave

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Just sprinkle the wet brush—lather your face

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Among his experiences was the stopping of a big lion on a charge.

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Best grade cedar canoe for $20

We sell direct, saving you $20.00 on a canoe. All canoes cedar and copper fastened. We make all sizes and styles, also power canoes. Write for free catalog giving prices with retailer's profit cut out. We are the largest manufacturers of canoes in the world.
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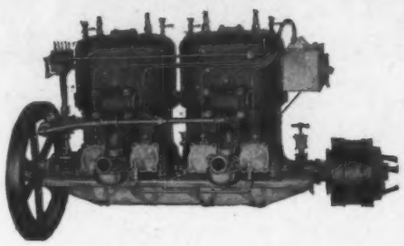
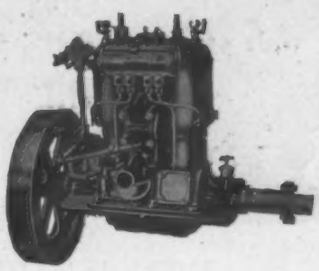


4 Cylinder, 2 Cycle, 5x5, 40 H.P.

Atwater Kent Ignition. Force Feed Mechanical Oiler. Composition Aluminum Bed. Salt Water Fittings. Nickel Steel Cranks.

480 Lbs., $500.00

2 Cylinder, 2 Cycle, 20 H.P., $250.00



60 H. P., 6 Cylinder, 2 Cycle Racer, 300 Lbs.

CRANK SHAFT. Krupp nickel steel.

CYLINDERS. Finest quality of Swedish gray iron.

WATER JACKET. Of hammered nickel and copper composition, in one piece, surrounding the six cylinders.

CRANK CASE. Composition of nickel and aluminum with hollow segments between the bearings.

FRAME. Of skeleton form of Krupp nickel steel surrounded and braced by nickel-aluminum crank case.

BEARINGS. Of pure nickel and tin formed under pressure and are interchangeable.

CONNECTING RODS. Nickel steel with inserted bearings.

WRIST PINS. Of tool steel bored hollow and ground.

FLY WHEEL. Has a ground center of high carbon steel with a 1-8 in. thickness at the hub and a thickness of 1-32 in. at the rim, to which is attached a rim of Manganese Bronze. The peculiar construction of this wheel allows it to act as a gyroscope, owing to the flexible center, and places the weight in the proper position without cross strains on the crank.

REVERSE GEAR. Entirely of nickel-steel and bronze constructed upon the multiple disc principle and is the lightest and strongest gear yet produced, weighing less than 40 pounds. Price $100 extra.

WEIGHT. Engine without reverse gear, 298 pounds, or less than five pounds per horsepower.

THRUST BEARING. Is of a special multiple roller type, suitable means being provided for lateral adjustment that the cranks may not be forced out of alignment with the cylinders.

PISTONS. Dome shaped top with radiating fins upon under side and provided for cold-air blast to sweep the inner surface at each stroke.

CIRCULATION. By special form of nickel-copper composition pump which forces water through the main jacket without the use of piping.

IGNITION. By single coil and special timer and distributer.

MANIFOLD. A composition of nickel and aluminum of ample size to supply six cylinders.

CARBURETOR. Is of special design built into the manifold and having an intake opening of 16 sq. in. which is approximately the capacity of sixteen ordinary carburetors, thus reducing the back pressure to a minimum and avoiding the use of a number of individual carburetors which have been found impossible to adjust in unison.

EXHAUST PORTS. Entirely surrounded by water, are of very liberal dimensions and each one leads to a separate vertical chimney of 24-gauge steel. If desired, they can be furnished piped into one outlet with muffler.

COMPACTNESS. The compactness of this motor may be understood from the fact that the base is but 34 in. over all, and but 10 in. between foundation timbers, with a total width of 13 in. Height, above center of shaft, 18 in., and below center of shaft, 5 in.

PROPELLER. This is specially constructed of aluminum and nickel and is 20 in. diameter and 35 in. pitch and weighs but 5 1-4 lbs. Under normal conditions, with suitable hull, this engine turns this wheel above 1200 R. P. M. A greater pitch can be used with greater diameter if the hull is of specially light construction.

PRICE. Without reverse gear but inclusive of wheel and tobin bronze shaft is $2000.00.

Special Discounts to Agents

EMERSON ENGINE CO., Alexandria, Va.

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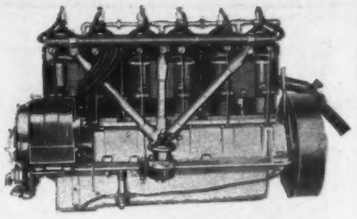
ONE HUNDRED DOLLARS IN GOLD TO THE OWNER
THIS SILVER TROPHY CUP SUITABLY ENGRAVED TO THE DESIGNER FOR
THE FASTEST MILE, 1910, WITH THE
REVILLION LIGHT SIX-THIRTY



NO STRINGS ON THE OFFER—BOATS OWNED BY MEMBERS OF THIS COMPANY BARRED-TIME TO BE TAKEN AT A REGULAR CLUB EVENT, WITH THE START ANNOUNCED AS IN THE CONTEST; DETAILS AND TIME CERTIFIED TO BY OFFICIAL TIMERS.
THE OBJECT OF THE CONTEST IS TO DEVELOP THE FASTEST TYPE OF HULL FOR THIS MOTOR.

THERE IS NO OTHER SIX-CYLINDER MOTOR AS LIGHT OR EQUAL POWER FOR WEIGHT

HERE ARE SOME OF THE GOOD POINTS—REVERSE GEAR INTEGRAL—REMY HIGH-TENSION MAGNETO GEAR DRIVEN—DOUBLE IGNITION SCHEBLER CARBURETOR—ALUMINUM BASE—NICKEL STEEL DROP-FORGED CRANK SHAFT, OIL-TREATED—NICKEL BABBITT DIE-CAST REPLACEABLE BEARINGS—BALANCED PISTONS—ECCENTRIC TURNED RINGS—DROP-FORGED CONNECTING RODS—POSITIVE FLUSHING LUBRICATION OIL CIRCULATING PUMP—LARGE VALVES IN THE HEAD—VALVE CAGE REMOVABLE BY LOOSENING ONE NUT.

PRICE THE SENSATION OF 1910—CATALOG R-8.

6-CYLINDER, 30 H.P. LIGHT SIX-THIRTY 365 POUNDS $445.00

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ELEKTRA—25x4 FT. 8 IN.—21½ MILES.

DELIVERIES AT DATE OF THIS ADVERTISEMENT SOLD TO APRIL FIRST, 1910. THEN ONE PER DAY TO JUNE FIRST. AFTER THAT DATE PRICE ADVANCES.
YOUR DEPOSIT WILL HOLD A DELIVERY DATE FOR YOU.

DUPLICATE OF THIS BOAT, WHICH WAS EXHIBITED AND SOLD AT THE NEW YORK SHOW, MAHOGANY PLANKED AND DECKED, AUTOMOBILE CONTROL $1,250.00

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BOSTON, 93 HAVERHILL ST. NEW YORK, 612-30 CHURCH ST. PHILADELPHIA, THE BOURSE

The Housing of Motor Boats

(Continued from page 308.)

differential pulley to be one of the most useful and labor-saving devices yet found, and as the use of a derrick for raising the stern of the boat will generally cost in the neighborhood of five dollars each time, the thirty or forty-dollar outlay required for the private device will be saved in a couple of seasons at the most. There is but one difficulty—when your friends find that you have such an apparatus you will be besieged on all sides with requests for the use of the pulley "for a couple of minutes till I see if I bent my shaft or nicked any of my buckets the last time I passed over that shoal."

Horizontal sliding doors cannot be used for closing the outside end of the slip, as there will be no lower guides in which they can move. Swinging doors are generally used, but the objection to these is the difficulty of opening or closing them in the face of a heavy wind. If the doors are small a set of ropes and pulleys may be arranged to hold them in place and to facilitate opening and closing them, but even with this, a stiff wind blowing against the front of the boat house will make it a difficult operation. Some method should be used for making certain that the doors will stay open when the boat is out, for the greatest inconvenience may be caused by a return to the boat house, to find that one or both have blown shut. A door that slides vertically is one of the best that can be used in a boat house with a comparatively high roof, and if counterbalance is used it should move up and down with ease and stay in any position in which it is left. Doors which swing inward would be easy to open and close, but they take up so much unnecessary room that they will seldom be found in a well-designed boat house.

Nearly all of the foregoing suggestions apply only to boat houses situated on bodies of fresh water unaffected by the tide. It is impracticable to build a boat house for a small craft on any body of salt water where the tide causes a change in the level of over four or five feet, and about the only thing left is a stout, waterproof covering for the cockpit and a safe anchorage near the shore. In the winter time the boat must be hauled out and covered.

Books for the Yachtsman's Library

A VOLUME OF CRUISES

Cruising narratives always have an indescribable charm to those through whose veins flows a certain amount of salt water, and a book we have gotten hold of recently, with the short but infinitely suggestive title "Cruises," by Robert Barrie and George Barrie, Jr., two yachtsmen who are known to many along the coast from Hampton Roads to Newport, has proved the best reading we have blundered across in many a day.

The book is an account of various cruises taken by the authors between the early 90's and 1907, and stretching from Newport to the Delaware, and on Chesapeake Bay as far south of Newport News. They were taken in boats of varying size and rig, and not a little of the charm lies in the fact that whenever a new boat has been purchased the reader is as much interested in the way she handles on the initial tryout as the owners themselves must have been. Some of the boats they owned were boats with a history and known by name to every sailing man who has followed the game for the last twenty years. One of these was Liris, that sterling sloop which came from the board of William Gardner in 1889—the first of his work in this country. That the old racer was transformed to a ketch and sailed with a single man forward but adds to the interest in her subsequent performances. Another of these boats was the cutter Irex.

There is an outside trip from the Delaware north in the 36-footer Mona which fills one with envy; but in the main the cruises were on the Chesapeake, and the beauties of both shores of that delightful and historic cruising ground lose nothing in the telling. It is an easy and familiar narrative, with that intimate personal touch that makes one feel as if he were one of the crew. The literature of yachting would be richer if it had more such cruises at its command. We advise all those who love a good yarn and a good ship to read the book.

("Cruises, Mainly on the Bay of the Chesapeake." The Franklin Press, Philadelphia.)

A HISTORY OF THE SAILING SHIP

There have been at various times numerous histories written of the development of maritime power in specific countries, but never, so far as we know, has there appeared a comprehensive history of the sailing ship from the very earliest records in existence to recent times until this present volume, entitled "Sailing Ships and Their Story," by E. Keble Chatterton, was published. This book goes back to the sixth century, B. C., and traces the development of the sailing vessel through its various transition periods down to the present time. It is done in a very thorough manner, using as a basis records found in various archeological explorations, and traces in a readable way the development of the modern ship, which still retains many of the principles which were already known to the ancients eight thousand years ago—such as the sheer, the methods of staying the mast, brails, steering oar, etc. The author's deductions are all plausible, and show an intimate knowledge of his subject. The book is well illustrated from designs collected from various museums of Europe and, coming down to later times, from paintings and photographs of the various rigs and types of vessels. For anyone interested in that most wonderful of man's handiwork—the sailing ship—it will prove exceedingly valuable, and we can recommend it to all lovers of the sea.

("Sailing Ships and Their Story." E. Keble Chatterton. J. B. Lippincott Company, Philadelphia.)

A Planking and Decking Clamp The Cutler Clamp Company, of 310 Lenox Avenue, New York City, claim that their clamp is ten times more efficient than chain (clamps and all other methods combined) for setting up planking and decking on boats and yachts. The Cutler clamp is made from the best malleable iron process, and can be used on all planking and decking jobs on boats from 12 feet up to 60 and 80 feet in length, and is guaranteed to save from 10 per cent to 25 per cent of cost on all smooth planked jobs.

Being in one piece it can be applied to the timber with oak wedge instantly, and the planking or decking wedged into position for fastening.

There is no time wasted in reaching or climbing or shoring or nailing on temporary cleats as in the old way.

Cutler's clamp is applied at the strakes edge, and works perfectly on both courses of planking, from the gunwale down or from keel up.

It will not slip or work loose while nailing off.

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TRADE MARK

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SEA-GOING MOTOR BOATS

WITH THEIR CONSISTENT GOODNESS OF DESIGN AND POWER EQUIPMENT ARE ESPECIALLY ADAPTED FOR ACCEPTED

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THE GURNET DORY—18-30 FT. IS ABSOLUTELY SEAWORTHY, NON-CAPSIZABLE, SHALLOW DRAUGHT, FAST WITH LIGHT POWER—"A GREAT LITTLE SHIP," ONE OWNER CALLS HER. USED BY THE U. S. GOVERNMENT IN THE NAVY, LIGHTHOUSE AND REVENUE CUTTER SERVICE.

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OUR HULLS ARE BUILT DURING THE WINTER MONTHS BY DAY LABOR FROM AIR-DRIED LUMBER, UNDER PERFECT FACTORY ORGANIZATION, NOT TO CUT THE COST, BUT TO PRODUCE A UNIFORMLY SATISFACTORY BOAT IN ALL DETAILS OF DESIGN, MATERIAL AND WORKMANSHIP. EVERY DOLLAR OF VALUE IS WHERE IT WILL COUNT THE MOST FOR YOUR PLEASURE.

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20 DIFFERENT DESIGNS
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Michigan Steel Boat Co. 296 Bellevue Ave., Detroit, Mich.

An Affair of Oil

(Continued from page 328.)

"horse pieces" 2 feet long and 10 inches wide. These go at once to the mincer forward at the try-works. Imagine a fodder cutter with a single blade playing up and down in a slot. The horse piece, set edgewise, comes under the knife (operated by a heavy balance wheel and man power) and is sliced as evenly as ham to within an inch of the bottom. Thus it is held together, although in such shape that all the oil can be speedily extracted.

By this time the fourth mate and his boatsteerer have uncovered the try-works—a brick furnace built upon the deck aft of the fore shrouds. Two iron try-pots of about 300-gallon capacity are mortared in over the fire-boxes. The fires are started with scraps saved from the last whale, and the pots filled with minced horse pieces. When tried out each horse piece makes a scrap, and thus the whale itself furnishes fuel for trying out its oil. The oil is racked off into a copper tank, and when cool run into casks holding 300 or 400 gallons. Each outward-bound whaler carried immense quantities of shooks and hoop iron, and Bungs, the cooper, was an important man, and received as high a "lay" as a boatsteerer.

When the oil is boiled and stowed, the affair is finished. Then some attention is given to the ship, by this time a reeking shambles, covered from stem to stern with blood and grease. The oil is lippered up, the blood washed away, and the ship's company returns to their regular routine of dreary, trivial duty.

An Autumn Trip to Lloyds Harbor

(Continued from page 325.)

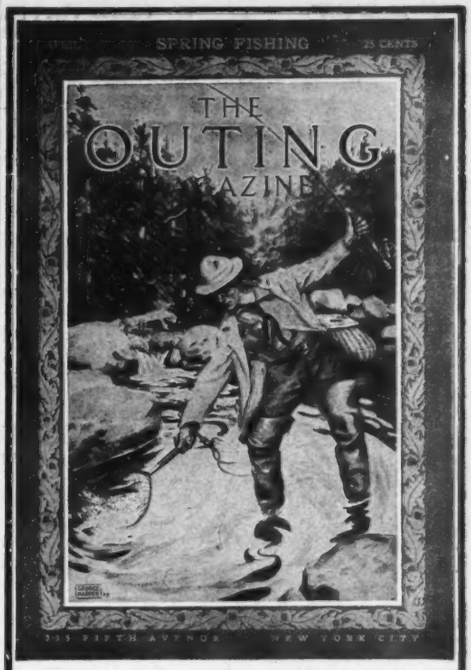
to eleven duck and a large loon, not a very large bunch, but the joy of the outing repaid the effort and the early hours.

After returning aboard for a late breakfast, part of the crowd effected a landing on the beach and started to beat the woods for game, returning at noon with four fat squirrels. The rest of us sailed out to Target Rock and put out lines for blackfish. The sport was excellent for those who had patience enough to keep baiting every few seconds, but the bergalts were so horribly industrious and greedy that most of us got tired of feeding them and went after scollops. The tide was just right for them, and by paddling near shore, in about a foot of water, we managed to pick a good mess off the bottom and grass. The all-useful scalping net was used.

Meanwhile the hunters had dug some soft-shell clams for the crowd. Dinner was a sumptuous affair. There being no boat big enough to accommodate the whole outfit, three small parties were arranged. The menu is worth mentioning, because of the fact that most of the courses we owed to the natural resources of Lloyd's Harbor. It read in part: Steamed clams, fried scollops, planked blackfish, fricassee of squirrel and roast duck.

The next was an ugly day, bleak and gray, but ideal for duck. The wind howled and we started early to set decoys, but although the shooting was brisk we found that nearly all the birds were coots, and we quit early in disgust.

The other boats were already under way when we hit the Scimiter, but the wind had increased to a strong breeze and we stopped long enough to tuck a couple of reefs in the mainsal, which delay obliged us to make the trip home alone. It was a free reach, though, and grand sailing, so the finish came all too soon. The crispness of the early November day was tempered by the sun, which broke through the clouds later, and we were sorry when the hook finally took bottom off New Rochelle and the last cruise of the season was over.



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¶ We promise you a good trip. Fill your creel with THE FUN OF FISHING, BRITISH TROUT IN YANKEE WATERS, and THE 'LUNGE OF FRENCH RIVER.

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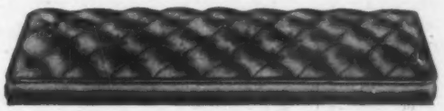

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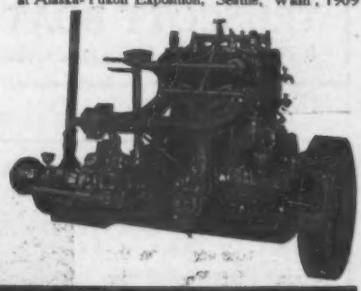

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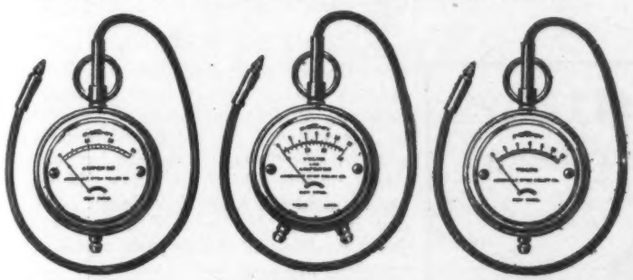

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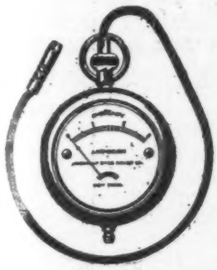

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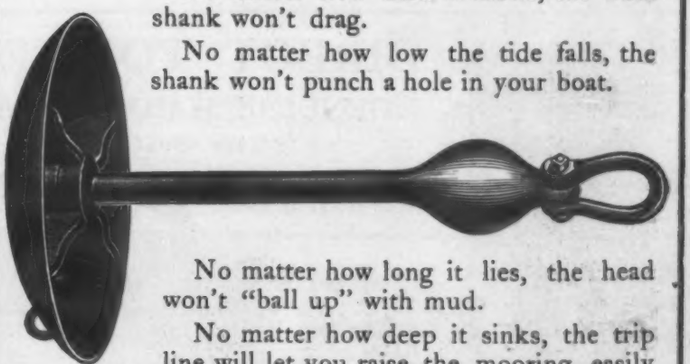

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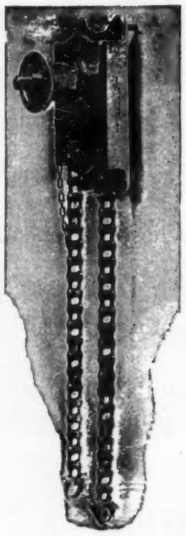

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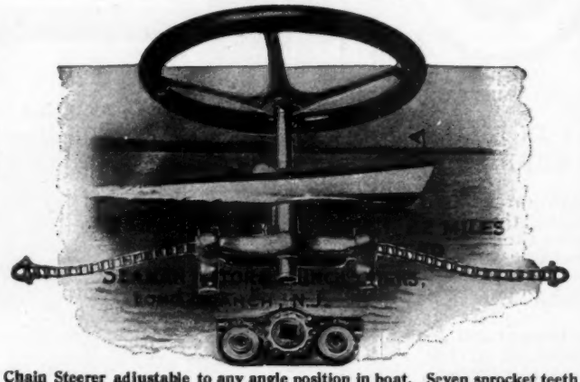

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SEAMAN MOTOR AND LAUNCH WORKS

LONG BRANCH, N. J.

The Month in Yachting

(Continued from page 319.)

of Robert Jacob at City Island. While primarily intended as a contestant for the Thousand Islands classic, the Gold Cup, the arrangement of the international race for the Harmsworth Cup on Huntington Bay gives her another opportunity for glory. That she will be seen on Huntington Bay there is no doubt. Mr. Gielow, while pre-eminently a designer of power boats, has not built many racers, and yet it is known that he has long held advanced views as to just how one should be designed and prepared for record-breaking speed bursts. Those who know him will be surprised if the engine is not already built and running. Two years ago a wealthy man wanted him to build a defender to meet Wolseley-Siddeley on Huntington Bay, but he declined, saying that he never would build a boat for an important race unless ample time was given him.

"A speed boat, if it is to be a success," he said, "is a product that requires time; and the engine to run it should have been thoroughly tested for several months at least before the supreme test. I am not going to stake my reputation on any hurry order."

Vale! the big black yawl Sybarita has gone to the scrap heap. The last seen of her as a racer was when W. Gould Brokaw brought her out for the annual cruise of 1908. Her success was not striking. The yawl Vigilant and the schooners Queen and Elmina walloped her, and Mr. Brokaw, who used to win cups in the old schooner Amorita, became tired of the unsuccessful monotony and withdrew her. Those yachting undertakers, Reiss & Co., now have her in hand and at this writing she is little more than a skeleton. The town of Montclair, N. J., purchased her mast, which is to be used for a flag pole, and the bronze and steel have been disposed of. Yet Sybarita was a handsome boat and fine for cruising. George L. Watson designed her for the late Whitaker Wright, of fated memory, in 1900. She made a fine record at Kiel, and in the Mediterranean in 1901. Her brightest page was the great 70-mile race with the cutter Kariad, which was sailed for a purse of two thousand pounds. There was a gale blowing and both racers sailed with topmasts housed and double reefs in their mainsails. At times the Sybarita's speed was more than 14 knots, and at the end of a long, hard day's thresh she crossed the line a winner by 2 minutes and 55 seconds, after allowing Kariad a handicap of something over 8 minutes. Races of this sort stir the blood and always added a glow to the Sybarita, despite her unsuccessful career on this side of the water. Myles B. Kennedy bought her after Mr. Wright killed himself, and in 1904 Mr. Brokaw brought her to this country. She will live in yachting history despite her short life of ten years.

Motor boat owners are, at this writing, the middle of March, beginning to find their way to the shrouded shipyards now. Boats rise on every hand, covered with canvas or concealed under wooden pent houses. At a distance you would think that the yard was as inactive as in mid-winter. But drawing closer you hear the tap of hull-testing hammers, the rasp of scraping knives and the whirr of fly-wheels, or perhaps the sharp explosion of the season's first dose of gasolene. The chrysalis is stirring. Here's to 1910!

A New Catalogue

The Caille Perfection Motor Company, of Detroit, Mich., have just gotten out a new catalogue of their marine engines in very attractive shape. The text matter is fully descriptive of the "Perfection" engines, and it is illustrated not only with comprehensive cuts of the motors but of all the working parts. Such catalogues show the rapid advance in the marine engine industry.

Your Yacht Needs

3 in One Oil because it is the only preparation on land or sea that prevents tarnish and verdigris on brass trimmings and parts and keeps them spick and span after cleaning.

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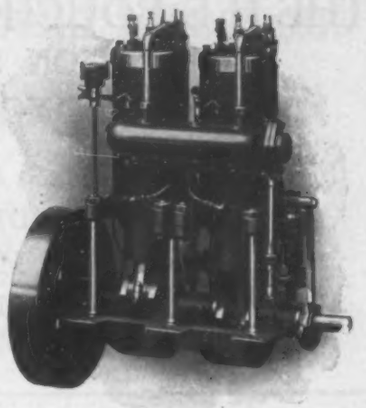

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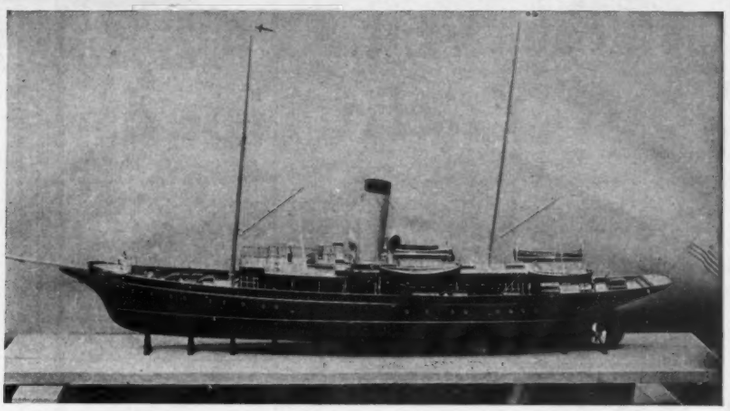

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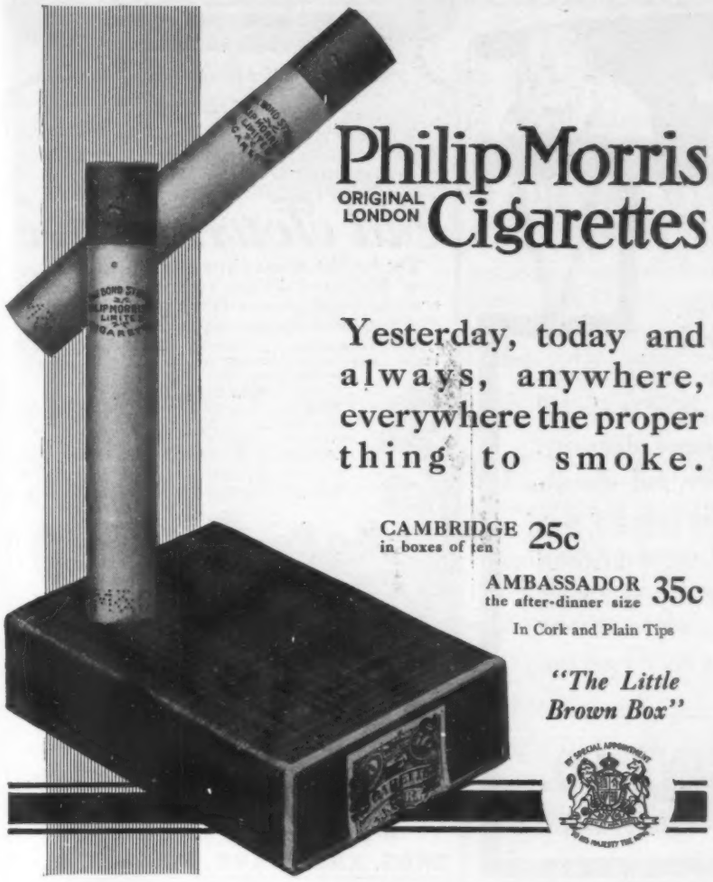

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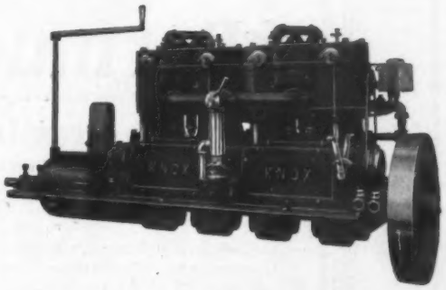

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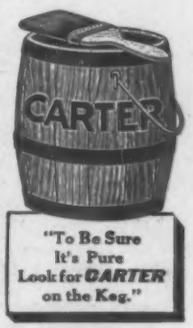

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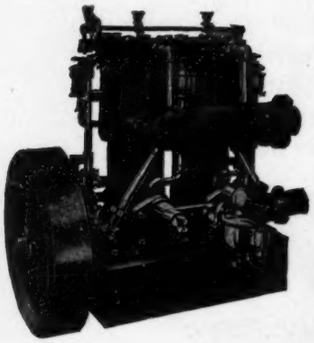

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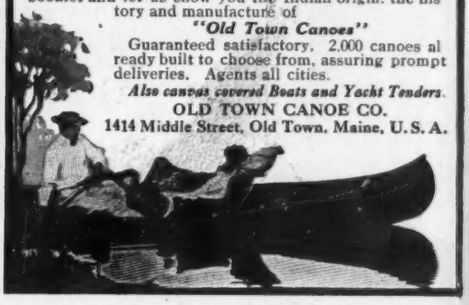

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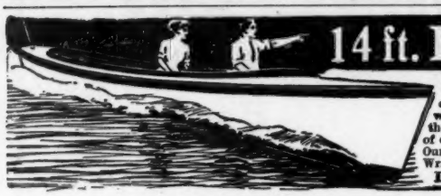

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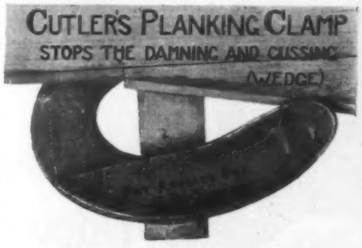

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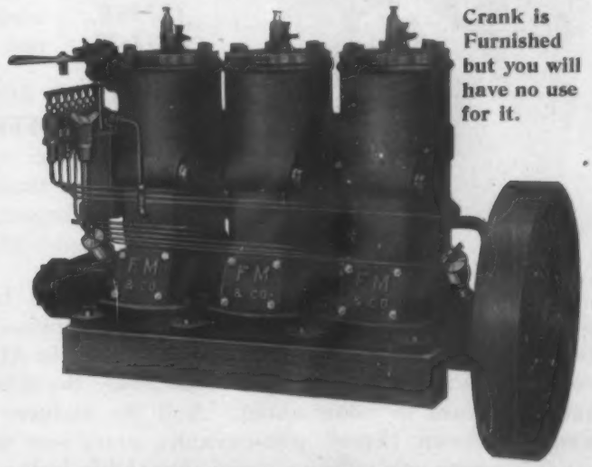

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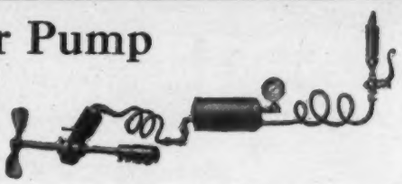

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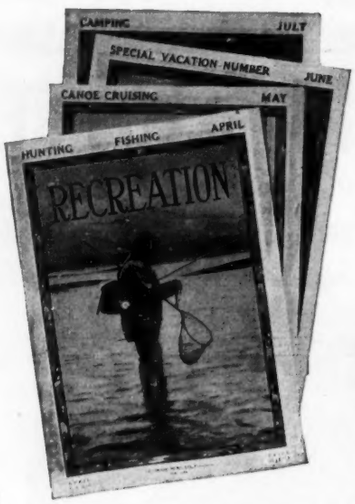

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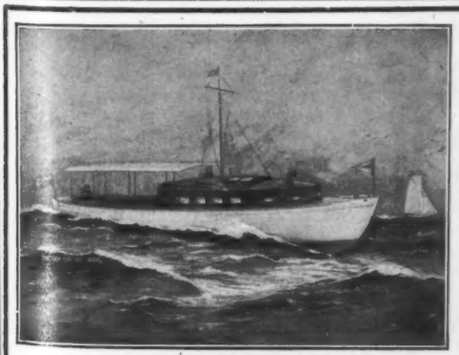

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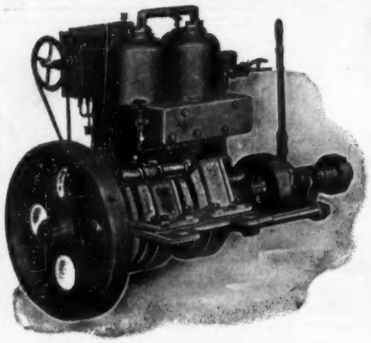

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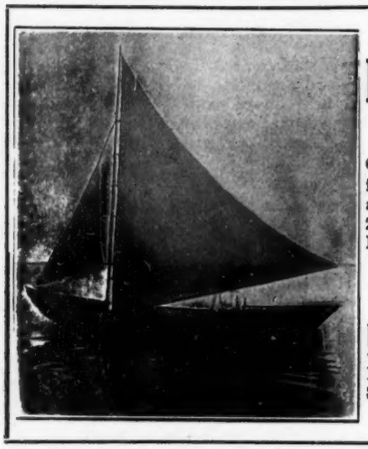

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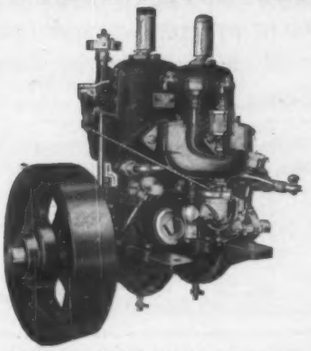

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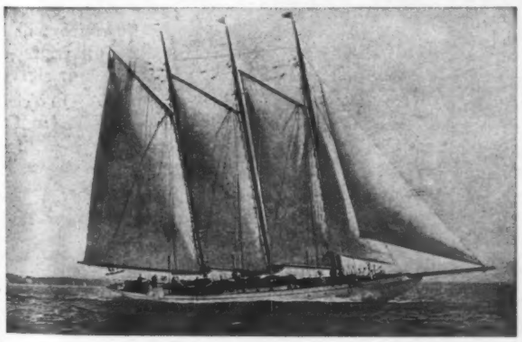

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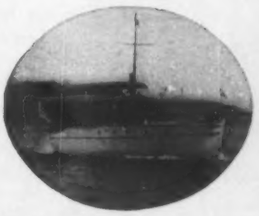

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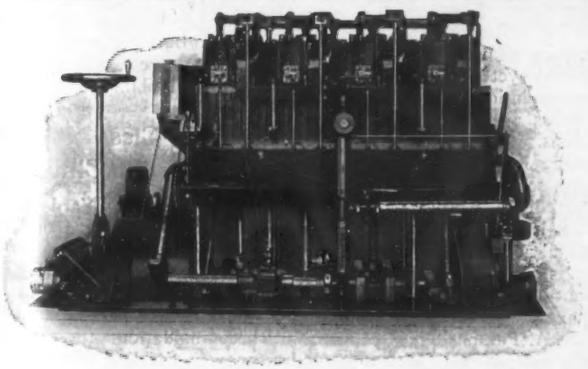

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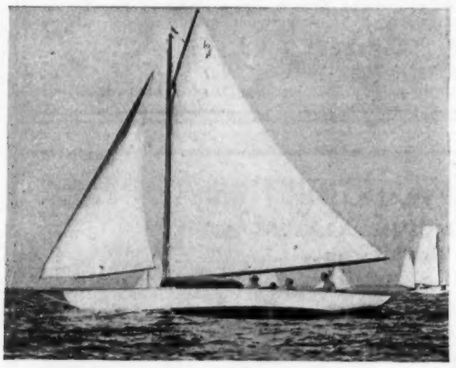
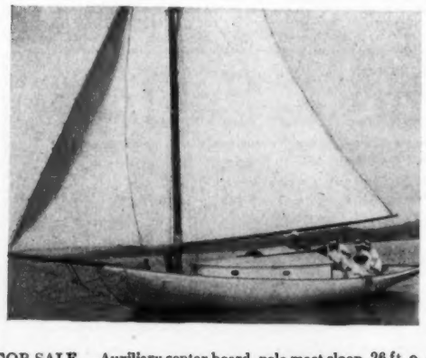
BOATS FOR SALE—CONTINUED FROM PAGE 293

NO. 4014.—FOR SALE.—Bargain. Modern keel sloop, 46x30x10x7'6; headroom 6'2. Designed and built by Charles Olmstead; oak frames, mahogany planking, 7 tons outside lead. Cabin finished mahogany, sleeps four; galley and crew forward, large lazarette for installing power. Inventory and sails exceptionally complete and good condition, dinghy, cushions, stove, tiled ice box, toilet. Boat is in splendid condition, is very able, easily handled and fast in both light and heavy weather. Owner being unable to use is anxious to sell. Inspectable New York. Apply William P. Kiggins, 45 Broadway, New York.



FOR SALE—One of the fastest of the American Y. C. one-design, 21-footers—"Jolly Tar." Dimensions: 33 x 21 x 8 x 5. Believed to be the only one of this class for sale. New suit of Jones & Robinson sails, 1909; new hollow mast and new rudder. In first-class condition throughout. May be inspected at Milton Point Shipyards, Rye, N. Y. Has won many prizes. Price $800.00. Owner has purchased larger boat. Apply to H. S. Duell, 2 Rector Street, New York City.



FOR SALE.—Auxiliary center board, pole mast sloop, 26 ft. o. a., 10 ft. beam, 3 ft. draught, built 1905. 4 H. P. Mianus engine giving 6 miles. Sails good condition, wheel steering gear. Large cabin with clothes lockers, dish racks, ice box, etc. Toilet, two anchors and cable, good cruising outfit. Always had the best of care and is absolutely sound. Reasonable. J. S. Brownson, 817 Broadway, New York.

FOR SALE—Cruising cabin centre board sloop "Treasure." 36 feet over all, 27 feet load water line, 9 feet beam, 2 feet 6 inches draught. Built by Smith, at Patchogue. Steers with wheel. Hull and sails in good condition. Robert S. Dennison, 19-21 Cliff St., N. Y. City.

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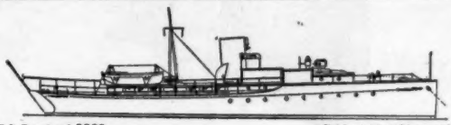

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An indication of the great activity in building large-size motor boats is shown from the fact that Messrs. Cox & Stevens have contracted for the following craft from their designs during the past six months:

Cruising motor boat Tekla, owned by Mr. A. Fabbri, just delivered and on her way to Miami; length over all, 95 feet; beam, 17 feet; draft, 4 feet, and power, consisting of two 75-horsepower Craig engines, giving a speed of 14 miles an hour. Cruising motor boat Kalmia, owned by Mr. Hobart J. Park, of New York, which has also just arrived at Miami. She is a twin-screw boat, having two 50-horsepower Standard engines. Her dimensions are: Length over all, 85 feet; beam, 14 feet 6 inches; draft, 3 feet 6 inches. High-speed, 100-foot twin-screw cruising motor boat Topsy, for Mr. John C. King, equipped with two 100-horsepower Standard engines. A large high-speed steel cruising motor boat, 120 feet over all, 16 feet beam, 5 feet 6 inches draft, equipped with two 300-horsepower Craig engines; now under construction at Pusey & Jones' yard at Wilmington, Del., for a New York yachtsman. This is probably the most elaborate motor boat yet constructed, and has remarkable accommodation, as well as a maximum speed of 20 miles an hour, utilizing the full power of the engines, while she will prove a very economical cruising boat at a speed of 14 miles an hour. A twin-screw steel cruising motor boat, 100 feet over all, 16 feet beam, 5 feet draft, having two 100-horsepower Standard engines and unusually liberal accommodations for the owner. This boat is also for a New York yachtsman. An 85-foot twin-screw motor boat, of the Viator type, having two 75-horsepower Craig engines, for Mr. H. A. Parsons, of Cleveland. This boat was the result of the successful performance of the 90-foot Viator, and on her completion, which will be about May 1, she will undoubtedly attract much attention in Western waters. A 40-foot raised-deck cruising boat for Mr. Alfred Mestre, of this city, equipped with 30-horsepower engine, and being built by Messrs. Stearns & McKay, of Marblehead. A 40-foot raised-deck cruiser for Mr. H. D. Chambers, of Montreal, equipped with a 30-horsepower Buffalo motor.

Conditions for the San Pedro and Honolulu Yacht Race of 1910

Conditions—The race is open to cruising craft belonging to any organized yacht club whose water line is over 30 feet. Boats to enter this must be bona fide cruising craft of substantial construction and rig, having full decks and water-tight cockpit. Yachts having fin or bulb keels or balanced rudders are barred

Measurement—The measurement for computing allowance is the length of the boat over all. Boats will rate for allowance from the closest full foot.

Crew—There will be no restriction as to the number or character of the crew, but the person in charge of the sailing of the yacht must be a bona fide member of an organized yacht club.

Sails—Lower sails to be those usually carried by the yacht when cruising. No restrictions on light sails.

Boats—Yachts must carry such small boats or tenders as they carry when cruising.

Stores and Water—Stores and water sufficient for thirty days must be on board. Water to be in fixed tanks or breakers.

Equipment—Anchors, chains or hawsers, sidelights, two compasses, sextant, chronometer and life belts or jackets for each member of the crew.

Ballast—Weight may be shifted fore and aft for the purpose of trimming, but no weight either in the form of stores or ballast must be jettisoned except as a measure of safety.

Time Allowance—The time allowance will be sixty minutes to the foot for the full course—a distance of 2,086 miles. No allowance for rig.

Time of Start—The race will start at 12 o'clock M. on Monday, July 4, 1910, from San Pedro, Cal.

Finish of Race—The finish of the race to be abreast of Diamond Head Light, Honolulu, Territory of Hawaii, not over a mile to leeward.

Entries—Entries must be received by the secretary of the Hawaii Yacht Club, Ltd., not later than May 1, 1910. Such entries must be in duplicate, and be accompanied by a full description of the yacht.

Protests—Protests concerning non-eligibility of a yacht must be in writing, and be made not less than forty-eight hours before the time fixed for starting.

The committee reserves the right to reject an entry if the boat is in any way unsuited for ocean racing, or is defective in hull, rig or stores. The committee, upon written request, will inspect any boat and certify as to her eligibility.

New One-Design Class for the Conanicut Yacht Club

In the Narragansett Bay Yacht Yard they are building a class of ten one-design 15-foot knockabouts from the board of C. D. Mower, for the Conanicut Yacht Club, of Jamestown, R. I. They have just finished a 45-foot high-speed express cruiser for C. D. Markham, of Providence. She has comfortable accommodations for four, and with a 45-65-horsepower Sterling engine is expected to develop over 15 miles. They are also building several smaller power cruisers.

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20-Foot Pierce raised-deck cruiser, 5 H. P. engine and reverse gear with set of 3 polished brass sailing lights, bell and whistle	**$550.**
15-Foot Pierce launch, 2 H. P. engine	**150.**
25-Foot Pierce launch, 8 H. P. 2-cylinder with reverse gear complete with spray hood cushion and 3 polished brass sailing lights	**725.**
18-Foot Pierce semi-auto runabout, 6 H. P. 2-cylinder engine and reverse gear complete with auto top, cushion and 3 polished brass sailing lights	**595.**
18-Foot Pierce standard launch, 3 H. P. engine and reverse gear; complete with awning, cushion, cover, and brass rails	**375.**
20-Foot Pierce launch, engine, 6 H. P. 2 cylinders, and reverse gear; complete with spray hood, cushions, and brass rails	**550.**
27-Foot auto boat, 12 H. P., a high-speed boat at	**1150.**

Special Motor Boat Lights, set of 3, Galvanized	$3.95	Life Preservers, Solid Cork, U. S. Inspected	$0.85	Bilge Pump, Double Acting, Polished Brass, No. 1	$2.25
Special Motor Boat Lights, set of 3, Polished Brass	6.95	Ring Buoys, 19 inch	1.75	Bilge Pump, with 5 ft. of rubber hose; No. 2	2.95
Fog Bell, 8-inch size, Heavy Polished Brass, Detachable Bracket	3.25	Ring Buoys, 21 inch	1.95	Boat Hook, Galvanized, on 6-ft. pole	1.25
Fog Bell, 8-inch size, Light Polished Brass, Detachable Bracket	1.95	Steering Wheel, Galvanized Iron, 12 inch	1.25	Boat Hook, Polished Brass, on 6-ft. pole	1.95
Chime Whistle, 15 x 3	4.45	Steering Wheel, Galvanized Iron, 16 inch	1.65	**Port and Starboard Lights Regulation Size**	
Ereful Whistle, 16 x 2½ inch, Polished Brass	3.45	Steering Wheel, Polished Brass, 12 inch	1.95	Galvanized; Plain glass; pair	$2.45
Fog Horn, 24 inch, Tin	.35	Steering Wheel, Polished Brass, 16 inch	2.95	Galvanized Fresnal glass, No. 6, pair	4.25
Fog Horn, 24 inch, Polished Brass	1.25	Ammeter	1.75	Bow Light, Galvanized, Plain Glass	1.95
		Volt Meter	1.95	Bow Light, Polished Brass	3.75
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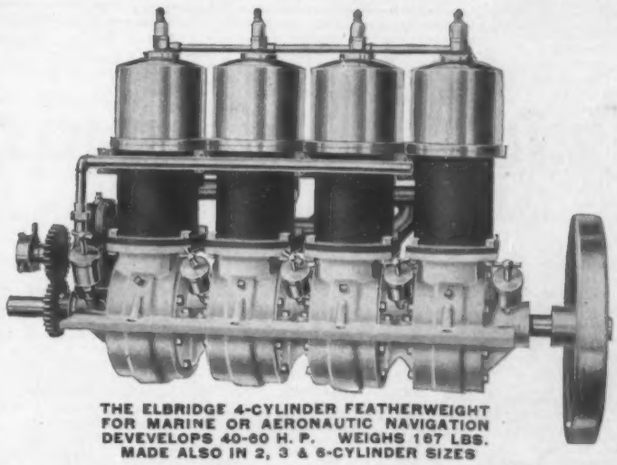

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It is the simplest, most reliable and handsomest motor ever built. Styles and prices to suit all boats and all pocketbooks.

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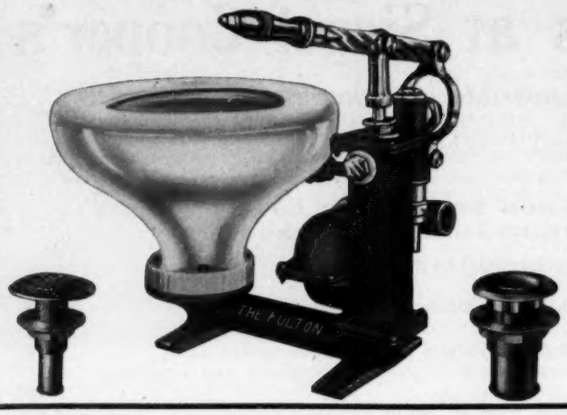

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NONE BETTER MADE

This Simplified Method of Installing a Marine Water Closet

should appeal to every Owner and Builder. My Patented Outboard Connections enable anyone to safely and securely install any make of pump water closet. A brace, bit, wrench and screwdriver are all the tools required; no solder joints that need a skilled mechanic. Rubber hose, tubing or lead pipe can be used. If positive "shut-off" is desired, the Patent Combination Sea Valve is recommended in preference to antiquated, clumsy and unreliable sea cocks, where spindles reduce area fully one-third, and corrode and stick requiring a 2-foot wrench to open or close them. (Did you ever try this in the bilge of your boat?)

The unsolicited endorsement of this method of installation was demonstrated by thousands who saw it at the New York Motor Boat Show.

Catalogue, with full particulars, prices and discounts, on request.

"The Fulton" Closet (as per cut) with porcelain or wood seat, $25.00; with outboard connection, ready to install, $30.00.

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One of the Popular Engines of the New York Show

The new Eagle, manufactured by the Progressive Manufacturing Company, of Torrington, Conn., was one of the noted machines of the show. The new line of engines, which are built in either make-and-break or jump-spark, are so arranged that the systems are interchangeable. Not only is the carburetor located well below the level of the inlet ports, but the inlet valve—the engine is built on the two-port principle—may be instantly regulated for lift from the exterior of the engine by the simple method of loosening a lock nut and adjusting the tension screw, which projects through the valve casing.

The Progressive people certainly blew themselves in the way of equipment. Hyde windlass propellers, Thermo silencers, Connecticut timers, Schebler carburetors, Orswell or Perfex ignition in the jump-spark type, and Lunkenheimer lubricators and grease cups being part of the regular equipment. Throttle and spark controls are clamped together, one directly above the other, so that both may be operated with one movement, if desired.

The control levers are drop-forgings, which may be rolled out and lengthened, flattened and bored for distant controls, should the purchaser so desire.

The hand-hole plates, giving access to the crankshaft connecting rod bearings, are of real serviceable size, and large enough to easily admit the hand.

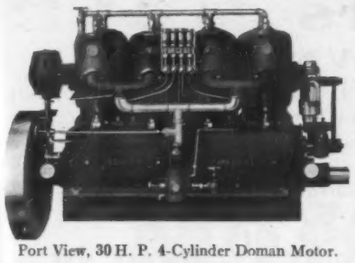
Bermuda Power Boat Race

The power boat race to Bermuda for the James Gordon Bennett Cup and a cash prize of $1,000 will be started from the station of the Motor Boat Club of America, in New York harbor, on Saturday, June 25, 1910, and the finish will be as hereinafore at a stakeboat off St. David's Head.

It is open to seaworthy boats not over 100 feet over all nor under 40 feet over all. A seaworthy boat is a substantially built, full-decked vessel having engine and living accommodations housed in and being equipped with all the tackle and appliances necessary to enable her to perform a long passage in open water.

Rating—Will be calculated under the 1909 rule of the American Power Boat Association time allowance table, the distance for computation and allowance to be on a basis of 650 nautical miles.

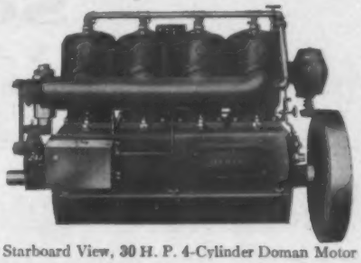
Entries and Measurements—Entries will be received up until five days before start of the race. All contestants must be measured by the official measurer at least forty-eight hours before the start. There will be no entrance fee. The fee for measurement will be $10.00.



Port View, 30 H. P. 4-Cylinder Doman Motor.

DOMAN

"The Motor of Quality"



Starboard View, 30 H. P. 4-Cylinder Doman Motor

WE have been building Marine Gasoline Motors and Engines of the four-cycle type for the last fourteen years. We build them in sizes from 5 to 200 H. P.—2 to 8 cylinders.

They are the product of a gradual refining process. In their present state they approach the highest degree of development in the marine construction line. It means that you secure power that will give you satisfaction at **all times.**
In short, quality through and through. Send for our catalog.

The H. C. DOMAN CO., Dept. "H," Oshkosh, Wis., U. S. A.

The High Grade Engine Builders

Western Stock Branch:
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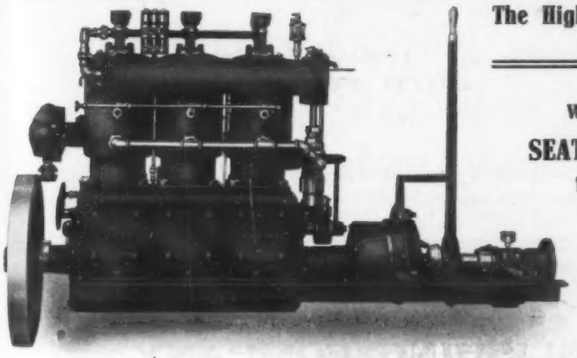
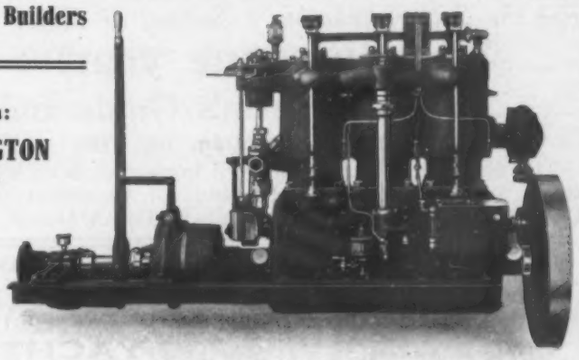


Port View, 30 H. P. 3-Cylinder Doman Heavy Duty Engine



Starboard View, 30 H. P. 3-Cylinder Doman Heavy Duty Engine

Insist Upon Having Your New Launch Fitted with the PEQUOT POWER BILGE PUMP

It can be instantly attached to the propeller shaft of any engine. It can be thrown into or out of operation at will. **Anyone can attach it. No one can borrow it. Always a dry boat.** Easier, quicker and safer than hand pumping. Three sizes, to fit any shaft up to 2½ inches. Ask for Catalogue H and full size picture.

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INDIAN GIRL CANOES

e designed and made by the Rushton people, and have kept first place for so any years because in no other canoe are so perfectly combined the features of

SAFETY, COMFORT, BEAUTY, LONG SERVICE

eady, strong and dependable, as good as can be all the way through, and refore are best for the Sportsman's hard usage. Graceful, perfectly finished d safe for the Idler's amusement.
ree Book illustrates and describes different styles of canoes. One will suit you in ign, size and price. We ship direct where we have no dealer near you. **Write us.**

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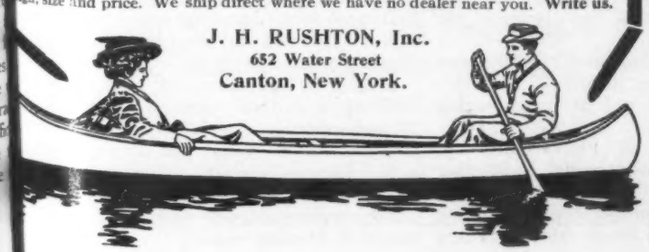

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to the land of health-giving breezes and unique scenic beauties

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Its exhiliarating air imparts new vigor and makes life incomparably better worth living.

The country traversed by the Reid Newfoundland Company's trains and steamers is exceedingly rich in fish and game.

THE HOME OF THE LORDLY CARIBOU WHERE TROUT AND SALMON ABOUND

Beautiful fiords, guarded by lofty cliffs, present unrivalled facilities to the Yachtsman.

Write for Booklet.

J. W. N. JOHNSTONE, General Passenger Agent
Reid Newfoundland Company **St. John's, Newfoundland**

Some Special Offers

OF VALUE TO THE BOAT-OWNER

The following offers contain books that are of interest and use to every owner of a sailing yacht or motor boat. They are practical works containing valuable information which no boat-owner should miss.

For the Boat-Sailor

Yachting (one year) $2.00
The Small Yacht, 2.00
BOTH FOR **$3.00**

Its Management and Handling for Racing and Sailing

By Edwin A. Boardman

The latest book published on this subject. The author has had much practical experience in designing and sailing small yachts.

For the Motor Boat Man

Yachting (one year) $2.00
How to Run and Install .50
BOTH FOR **$2.00**

A Gasolene Motor

A Practical Hand-Book on the Gas Engine.

For the Sailor, whether a Sailing or Motor Boat Man.

Yachting (one year) $2.00
The Yachtsman's Guide and 1.00
BOTH FOR **$2.00**

Nautical Calendar for 1910

This Reference Book is too well known to need a description here. It will contain even more information than heretofore, including Rules for Measurement, Classification and Time Allowances of Launches, A. P. B. A. Rating Table and Government Regulations applying to Power Boats.

FOR CANADIAN POSTAGE ADD 50c., FOREIGN $1.00

Send in your Subscription now so as not to miss a single issue of the Spring or Summer. Remember that the Yachting Season is here. Remit to

YACHTING PUBLISHING COMPANY,
20 Vesey Street, New York.

Some Recent Yacht Sales

B. B. Crowninshield, of Boston, reports the following sales:

The 21-foot knockabout Holly II, sold by Warren Child to Dr. E. H. Nichols, of Boston; the 25-foot keel sloop Flirt, sold by F. E. Bond, of Philadelphia, to J. J. Henwood, of Boston; the 27-foot auxiliary yawl, Mahdeena, sold by A. C. Needham, of Boston, to E. H. Pentecost, of England; the 84-foot steam yacht Philomena, sold by George F. West, of Portland, Me., to Jeremiah Campbell, of Boston.

The Hollis Burgess Yacht Agency reports the following transfers:

Fast 22-foot sloop Marie L., owned by George Lee, of Boston, to a prominent member of the Boston Yacht Club; the 21-foot raceabout Tunipoo, owned by Charles A. Cooley, of Brookline, to Fred O. Fish, of Winchester, Mass.; the auxiliary sloop Iuaki, owned by Mr. Elmer A. Chadwick, of Lynn, Mass., to Mr. Charles H. Sherburne, of the Corinthian Yacht Club; the 32-foot motor boat El Cio, R. H. Curry to W. W. Rowse, of Lexington, Mass.; the 52-foot cruising yawl Attalie, to Louis Bacon, of Boston, and the auxiliary sloop Nakoo, J. W. Britton, of Boston, to E. S. Cowan, of New Bedford, Mass. Horatio Gilbert, of the Boston Yacht Club, has sold the cruising yawl Friendship to Francis A. Guinivan, of Beverly, Mass., through this agency.

John G. Alden, of Boston, Mass., reports the following sales: Louis Bacon, of Boston, has sold the 38-foot waterline schooner Priscilla to A. L. Dole, of Boston.

A. L. Dole, of Boston, has sold his open speed launch to Louis Bacon, of Boston.

Mr. Alden also has an order from H. W. Hanan, of New York, for a 40-foot, waterline, flush-deck keel ketch, 54 feet over all, 12 feet beam, 8 feet draft.

Some of the People who will Use Sterling Engines in 1910

Mr. Geo. A. Blewett, of Napanee, Ont., is having built a 32-foot by 5-foot 3-inch boat, which will be powered with an 18-25-horsepower, model B Sterling engine.

Mr. E. Q. Trowbridge, of New York, is changing the power in his boat Barbara, in Connecticut, to a 45-65-horsepower, model B Sterling, which will make this boat, which is 37 feet 9 inches by 7 feet 4 inches, a very fast craft.

Mr. Thos. Boucette, of Newark, N. J., is building a 35-foot by 8-foot cruiser, which will be powered with a 13-horsepower Sterling engine.

Mr. Wm. Dickel, of Wildwood, N. J., will go in for speed this coming season, and for his own use is having a speed boat built, to be powered with a 25-40-horsepower, model B Sterling speed engine. Mr. Dickel will race in and around Philadelphia.

Mr. Ralph O. Durrell, of Winchester, Mass., will keep them all hustling this coming season to stay with him, as he is having a new speed boat built. She will be 35-foot by 5-foot 9-inch beam. A 45-65-horsepower, six-cylinder model B Sterling engine will furnish the power, and a speed of about 24 miles per hour is expected.

Mr. Paul Fenn, of New York City, is having built a 35-foot by 5-foot runabout, in which will be installed a 25-40-horsepower, model B Sterling engine. He expects to get at least 17 miles per hour with this outfit.

Mr. John Forman, of Montreal, Quebec, has ordered a 30-45-horsepower, model B, four cylinder Sterling engine for a boat he is having made for his own use.

Mr. H. W. Goodnow, of Philadelphia, has ordered an 18-25-horsepower, model B Sterling engine.

Mr. Schuyler V. C. Hamilton, of New York City, is having built a very heavy cruiser, 36 feet by 9 feet 6 inches, to be powered with a 25-horsepower, model B Sterling engine.

Mr. George B. Goodall, of Sanford, Me., placing an 18-25-horsepower, model B Ster engine in his boat Sea Bird.

Mr. Geo. P. Harrison, of Philadelphia, ordered an 18-25-horsepower, model B Ster engine.

Mr. George Holcomb, of Chicago, Ill., a 40-by 8-foot 2-inch boat, in which will be install 30-45-horsepower, model B sterling engine.

Mr. W. A. Kelly, Brooklyn, has placed on o with the Sterling Engine Company, Buffalo Y., for one of their 18-25 horsepower, mod engines.

Mr. Frank McMillan Stanton, of New Y City, will instal a 30-45-horsepower, mod Sterling engine in his new boat the H Louise.

Mr. Neil MacNeil, of Philadelphia, Pa., ordered a 30-45-horsepower, model B Sterlin gine.

Mr. Aug. Picard, of Philadelphia, is build 29-foot by 7-foot 6-inch hunting cabin cr which will be powered with a 12-horsep heavy-duty Sterling engine.

Mr. James Riddell, of Philadelphia, has or from the Sterling Engine Company, of B a 12-horsepower, heavy-duty engine.

Dr. K. Ruppenthal, of Philadelphia, is b built a 36-foot Limousine cabin cruiser, in will be installed an 18-25-horsepower, mo Sterling engine.

Mr. S. M. Seymour, of New York C building a 25-foot runabout, equipped w 18-25-horsepower, model B Sterling engi use in Canadian waters this coming season.

Mr. George Steelman, of Woodbury, N having built a 28-foot by 5-foot 8-inch ope about, to be equipped with a 30-45-horse model B Sterling engine.

NOTICE TO MOTOR BOAT OWNERS

THERE will be more yachts put into commission this year than ever before in the history of yachting.

Therefore, there will be more boats sunk, burned, and damaged. There will also be more cases of collision. The ratio may be the same, but the number will increase. There will be only one class of men who protect themselves against these perils, namely, holders of Insurance Policies covering the above-mentioned risks.

LOSSES. We sell the kind of protection which you must have, viz: Prompt payment and liberal treatment.

This Company has agents in all cities in the United States of size.

For particulars concerning this form of policy, write to any agent of the Company, or to the home office.

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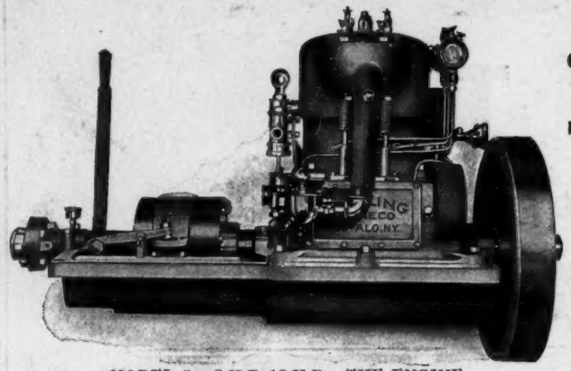
IN ADDITION TO YACHT POLICIES, this company insures every suitable class of dwelling and vessel, merchandise in transit, parcels in the mail, tourist insurance, salemen's samples, and many other classes of policies. If we have paid you losses on yachts, would it not be well to insure your other property with us?

STERLING QUALITY



MODEL C. 8 H.P.-12 H.P.—THE ENGINE

GASOLINE ENGINES FOR ALL MARINE PURPOSES BUILT IN SIZES FROM 8 to 240 HORSE-POWER

Milford, Del., Feb. 17th, 1910.

Sterling Engine Co., Buffalo, N. Y.

Gentlemen:

I have had your 12-H.P. Sterling Fisherman engine in my boat "Edwin" since the first day of October, 1909. This boat is 21½' in length by 8' 2" beam, and easily makes 10 miles an hour.

It has been in use every day since the engine was installed, towing oyster boats, and our creek is 18 miles run each way, and we have made this run of 36 miles every day up to the present time with the exception of 3 weeks in ice time. As far as the engine is concerned, I have not had one minute's trouble with it since I had it put in the boat, and it is all that you claim it to be. If there is another one put here it will be a Sterling. It is the fourth engine I have had in this boat, and I would not give it for all of the others.

You can use my name in regards to the Sterling engine, and you cannot praise it too highly, for she is a daisy.

Yours with best wishes.

JAMES R. CONARD.

STERLING ENGINE CO.

1258 NIAGARA ST., BUFFALO, N. Y., U. S. A.

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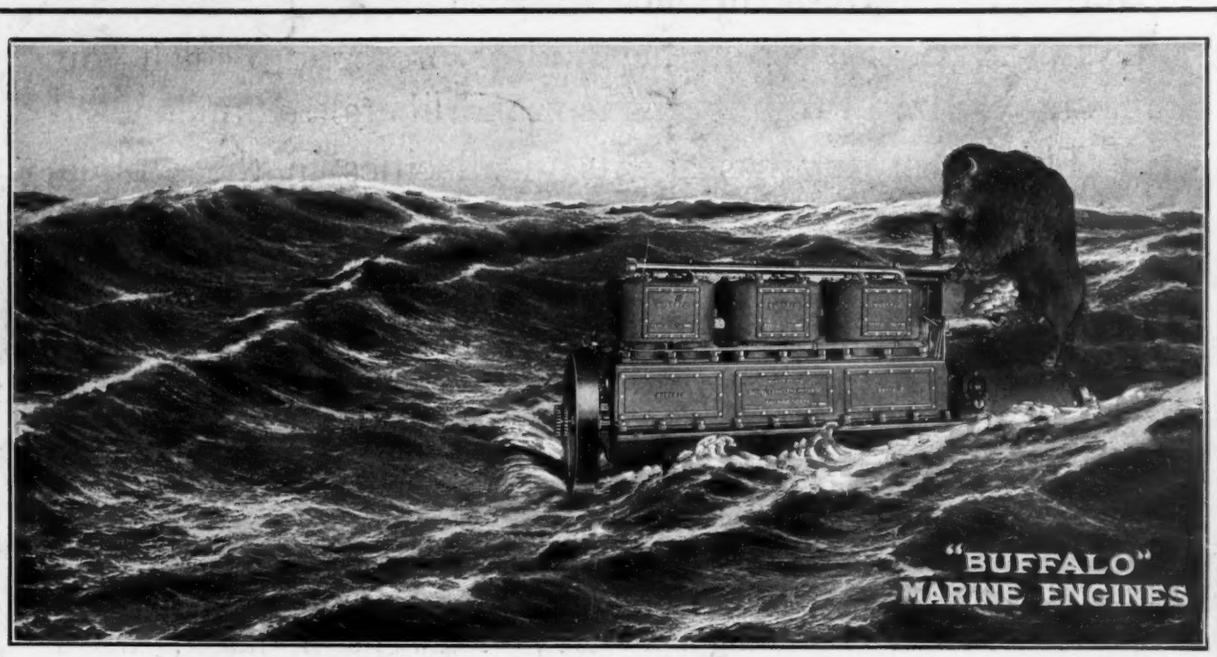
CHICAGO BOAT AND ENGINE CO.
1508 Michigan Ave.,
Chicago, Ill.



"THE ENGINE OF CONSTANT SERVICE"

FROM CANOE TO CRUISER

"An engine for any sort and size of boat." Twenty-two different engines—from 2 to 225 H. P., and from 1 to 8 cylinders—in Regular, Heavy Duty and High Speed Types.

Constant refinement of design, of course.
Improved construction, always.
But no better materials, or equipment, until science discovers them.

BUFFALO GASOLENE MOTOR CO.

Catalog?—Just say so, and we'll send it.

1260-1272 Niagara Street, Buffalo, N. Y.